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GUIDELINES ON THE PURCHASE, MAINTENANCE AND OPERATION OF BASIC INSURANCE COVERAGE FOR PROCESSING PLANTS IN DEVELOPING COUNTRIES *

Prepared by

A. James Edwards**
UNIDO Consultant

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** Senior Vice-President, Reed Stenhouse Limited, Toronto, Canada.

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INDEX TO SECTIONS

SECTION 1	GENERAL
SECTION 2	TENDER STAGE
SECTION 3	THE PURCHASE CONTRACT
SECTION 4	MAIN CLASSES OF INSURANCE
SECTION 5	TRANSPORTATION INSURANCE
SECTION 6	INSURANCE OF THE WORKS ("DIRECT LOSS OR DAMAGE")
SECTION 7	INSURANCE OF THE SELLER'S OR CONTRACTOR'S EQUIPMENT AND PROPERTY
SECTION 8	BUSINESS INTERRUPTION INSURANCE ("DIRECT LOSS OR DAMAGE")
SECTION 9	LIABILITY INSURANCES
SECTION 10	GENERAL LIABILITY INSURANCE
SECTION 11	PROFESSIONAL INDEMNITY INSURANCE
SECTION 12	EMPLOYERS LIABILITY INSURANCE
SECTION 13	TENDER AND PERFORMANCE BONDS OR GUARANTEES
SECTION 14	PRODUCT GUARANTEES
SECTION 15	COMPLETION OF PLANT: ONGOING INSURANCE
SECTION 16	INSURANCE CLAIMS

FOREWORD

The planned purchase and development of an industrial plant is a major undertaking and is often subject to both contractual and non-contractual difficulties.

Heavy financial investment, foreign content, professional expertise and labour content are all brought together in one place in order to produce a properly working plant.

While numerous plants are developed without problems it is however common to see financial difficulties arise from a variety of events which can seriously frustrate the completion and subsequent operation of new industrial plants.

The insurance industry at large is well experienced in many of the risks which have prevented project and plant performance in the past. Indeed it is the problems which have arisen over the years which have generated the need for the special types of insurance available today and which are now considered to be essential and prudent management tools in the development of industry.

These guidelines are not comprehensive. Rather they are intended to explain in simple general terms which specific classes of insurance are applicable to certain potential risks or perils and which party to the purchase contract should preferably purchase and maintain individual insurance policies.

Emphasis is given to the necessity of properly documenting insurance requirements in contract agreements. This is essential.

BASIC INSURANCE PROTECTION FOR PURCHASERS OF

PROCESSING PLANTS IN DEVELOPING COUNTRIES

GUIDELINES ON SPECIFIC CLASSES OF INSURANCE

(A) PROJECT RISKS

RISK	CLASSES OF INSURANCE	SECTION	PURCHASED BY
Procurement and shipment of goods, materials, supplies and equipment to site	Transportation Insurance	5	The buyer or the seller depending upon the terms of shipment
Goods, materials, supplies, equipment and work in progress on site. Testing risks	Insurance of the Works	6	The buyer or the seller - in joint names
Contractor's plant and equipment	Insurance of Contractors Equipment	7	Contractors
Project delays following loss or damage in transit or on site	Business Interruption Insurance	8	The buyer or the seller
Incidents causing injuries to third parties and/or damage to third-party property	Liability Insurance; General Liability Insurance	9 & 10	The buyer or the seller - in joint names
Faulty design, engineering and project management	Professional Indemnity Insurance	11	Prof. architects engineers, proj. managers
Injuries, illness caused to employees	Employers Liability Insurance	12	All Employers on site - unless their employees not permitted to sue

(B) PERFORMANCE RISKS

RISK	CLASSES OF INSURANCE	SECTION	PURCHASED BY
Financial Guarantees; Surety Bonds	Tender and Performance Bonds on Guarantees	13	Tenderers, seller contractors, sub-contractors on behalf of their clients
Product Guarantees and/or Warrantees	Product Guarantees	14	Provided by seller and/or suppliers
(C) OPERATIONAL RISKS - Loss of or damage to the plant - Breakdown of machinery; explosion of pressure vessels - Business interruptions - Injuries to third parties and damage to third party property - Automobiles - Injuries to employees; illness of employees - Fraudulent acts of employees - Financial default of customers	On-going Insurances	15	The owner of the plant

SECTION 1. GENERAL

1.1. The purchase and provision of an industrial plant involves the participation of many parties each of whom provides specific services at various stages of the project.

1.2. Each stage of the project is subject to a variety of perils or risks.

1.3. The buyer of the plant has three main concerns relating to the provision of the plant:-

- The plant is completed on time.
- The cost of the plant is within budget.
- Upon completion the plant works properly and in accordance with specifications.

1.4. The perils encountered by project participants at the various stages of completion can, and do, have serious effects on the buyer's concerns detailed above.

1.5. It is essential that thorough consideration be given to the purchase and maintenance of adequate project insurance programs to ensure both the continuation of the project, the avoidance of cost-overruns and the satisfactory performance of the plant.

1.6. While it is impossible for the international insurance industry to fully respond to every single peril which could impede project continuation, project cost and plant performance, the insurance industry is well able to respond to many of the major perils and thus provide substantial protection to offset otherwise crippling financial problems.

1.7. These guidelines are designed to clarify the types of protection available in relation to perils discussed at various project stages and during initial and the continued operation of industrial plants.

1.8. As far as possible the guidelines will relate to perils which could be encountered on a progressive basis as a project is undertaken from the tender or bid stage through to full operation of the plant.

SECTION 2 - TENDER STAGE

2.1. The relevant tender documents should make good reference to the responsibilities and liabilities to be carried by the successful bidder, to any bid-bond or bid guarantee to be provided, to the requirement for subsequent performance bonds or guarantees and to the general insurances to be purchased and maintained by the successful bidder and/or the buyer.

2.2. It is important that at the time of tender the bidder and the buyer know inter alia exactly what insurance protection each will provide. This avoids the possibility of the bidder including unnecessary insurance costs and/or failing to allow for insurance costs he would otherwise expect the buyer to meet separately.

2.3. The bidder should show in his tender his anticipated costs for all insurances he is to provide separately by insurance product; these should not be included in one overall item.

2.4. Similarly the bidder should show in the tender the amounts of insurance coverage he will obtain. This is important and should be followed up at the time a contract is subsequently negotiated.

2.5. Consulting engineers and architects in particular should declare the cost and amount of insurance they would provide and maintain in respect of their professional liability insurance. The amount of insurance is important; it may have to be large in comparison to the size of their actual duties especially where the consequences of an engineering error or omission could have far-reaching effects.

2.6. Consulting engineers and architects, at the time of tender and later during contract negotiations, often attempt to limit their overall liability to the amount of professional liability insurance they carry. This should be avoided as this amount could be quite low or alternatively should their insurance be cancelled or simply not renewed and no longer exists then their overall liability would vanish.

2.7. Following sections will provide guidance on which party should best obtain and maintain certain essential insurances. Whichever party is saddled with this responsibility the tender and contract documents should clearly state the situation.

2.8. It is possible, and in some jurisdictions quite normal, for the tender documents to direct the bidder where he is obliged to obtain insurance to use certain national or local insurance organizations. This should only be done where it is known in advance that the insurers in question are able to provide the specific types of insurance required. This is important.

2.9. Bidders often resist directives as to where they must buy insurance. It may be that bidders who are heavily involved in international work maintain ongoing international insurance programs, which would otherwise meet contractual requirements, and which are expected to be applied by the relevant insurer.

Similarly bidders often argue that they have excellent relationships with their existing insurers and are reluctant to have to drop them and purchase insurance from others whom they do not know.

2.10. In any event if the bidder is expected to obtain insurance it is preferable that the tender documents state clearly whether certain insurers are to be used or whether he has a clear field to obtain insurance from any insurer of his choice but who is also acceptable to the buyer.

SECTION 3 - THE PURCHASE CONTRACT

3.1. A very wide range of purchase contracts exist in standard form. These are often heavily amended to suit individual needs.

3.2. Alternatively specific purchase contracts are drawn up project-by-project. These may be designed by the buyer, the seller or a third party.

3.3. Whatever form of contract is used it is essential that clear details are shown of the forms of insurance to be obtained and maintained.

3.4. Similarly the contract must define which party is to obtain and maintain each form of insurance and which party or parties is to be protected under the insurance.

3.5. Additionally the contract should state clearly what remedial action will be taken by one party should the other party fail to meet his contractual obligations insofar as the purchase and maintenance of insurance is concerned.

Usually, and for instance, should the seller be saddled with the responsibility for obtaining insurance and fails to do this, then the buyer maintains the responsibility for stepping in and purchasing the insurance himself. Often this is connected with a penalty whereby the seller then becomes responsible for the payment of insurance costs incurred by the buyer, depending upon the circumstances attaching to the seller's inability to obtain the required insurance coverage.

3.6. It is important that the purchase contract addresses the currency of certain insurances. Where "direct loss or damage" insurance is concerned and replacement equipment or materials have to be obtained from abroad then "hard currency" insurance is needed.

This point must be considered early-on as the participation of many national insurers into such "direct loss or damage" insurance may well produce a problem when such insurers are unable to issue "hard currency" policies as foreign exchange restrictions exist.

3.7. The contract should also demand that evidence of the existence of insurance be furnished by one party to the other and that actual insurance policy documents be made available for inspection upon demand.

3.8. Quite apart from full references regarding the provision by the seller of performance, maintenance and/or "hold-back" bonds or guarantees, it is possible for the purchase contract to call for the seller to obtain similar bonds or guarantees from his sub-contractors or suppliers.

The failure of a sub-contractor or a key supplier could have an enormously detrimental effect to the pursuit of the project. While the formal request for and the provision of such instruments from a sub-contractor or supplier is a contractual matter between the parties concerned, there is nothing to prevent the buyer demanding such protection be obtained by the seller under their particular contract.

3.9. Depending upon the payment terms of the contract it is possible for the purchase contract to define who is to be the "Loss Payee" under "direct loss or damage" insurance policies. The relevant policies issued should accurately reflect this.

3.10. It is becoming increasingly necessary that the purchase contract defines the amounts of insurance to be carried. This subject is addressed elsewhere in these guidelines.

As far as "direct loss or damage" insurance is concerned, it is a comparatively simple matter to define the amount of insurance to be purchased. Under "liability classes" of insurance it is not so easy; the Bhopal disaster in India may well be an extreme example of what can happen in the field of injury to the public but it is indicative of just what has to be considered when an industrial plant is set up and operated.

SECTION 4 - MAIN CLASSES OF INSURANCE

4.1. Leaving aside such types of insurance as LIFE, HEALTH AND DISABILITY the remaining insurances are generally split into two major classes, i.e.,

- MARINE INSURANCE
- NON-MARINE INSURANCE

4.2. "Marine Insurance", which is the earliest form of insurance protection, relates to any form of marine venture and extends into transit risks which have an element of marine risk.

Thus marine risk insurers will extend cover to include a transit of goods by land, sea or air. Similarly this class of insurance business includes the third-party liability risks attaching to marine ventures.

4.3. "Non-Marine Insurance", virtually includes everything else.

This class is split into various sub classes and for the sake of simplicity and especially for these guidelines the sub classes can be assumed to be:-

- "Direct loss or damage insurance" i.e. the insurance of property against the risks of fire, theft, damage, etc.
- "Liability insurance" i.e. insurance against the legal liability incurred for death or injury to third-parties or damage to third-party property.
- "Performance insurance" - although not a generic term and almost never used this relates to the provision by insurance companies of performance and related bonds. Insurers issuing such bonds are commonly referred to as "surety companies".

4.3. The purchase of an industrial plant, especially where foreign participation is involved, contains perils or risks which fall under all of the above classes and stem from:-

- the transportation of equipment and materials.
- the erection, construction and installation of buildings and plant.
- the use of construction machinery and equipment.
- heavy labour content.

4.3. (cont)

- the simultaneous activities of various participants.
- the professional services of consulting engineers, architects, contract managers, etc.
- the testing, commissioning and start-up of the plant.
- the use of project vehicles.
- the continuing operation of the plant.

4.4. The extent of specific insurance products designed to protect many project risks is wide. However, not all insurance companies write every class of insurance business described in these guidelines. Many insurers have preferred business; certain specialized insurers exist and others are more general.

Care should be taken in the selection of insurers to be approached.

4.5. While it is prudent to select insurers who are known to specialize in various aspects of project risks it is also prudent to select insurers who are known to be both fair and equable concerning the assessment and payment of claims and who, above all, are financially sound.

4.6. A "guarantee" is only as strong as the guarantor.

Several thousand professional insurance organizations exist and although they mostly financially support each other, each must be capable of meeting the huge liabilities accepted by them every working day.

The possibility of insurance company failure is very real; the probability of failure is not so real but too many do occur.

4.7. Insurance companies range from very small "mutual" companies, formed by trade associations, etc. and where each policyholder becomes a "member", through insurance companies or organizations which are partially or wholly-owned by governments or by single private shareholders to very large national and international public companies where the ownership is widely spread.

4.8. Whatever the makeup of the ownership of an insurance organization may be it has to maintain sufficient financial reserves to meet its outstanding claims. Governments usually maintain the responsibility of checking on these reserves to ensure the continued viability of the insurer.

Nevertheless, failures occur and when this happens claimants who have not been paid may well not get paid - at least in full.

4.9. Insurance companies usually pass-off, or "reinsure", their liabilities with other insurance companies - either to a single participant or to many participants. The more there are involved the more the risk is "spread" and the greater is the security to the policyholder - provided the "reinsurers" or participants involved are sound and of good standing.

4.10. There does exist government-owned insurance companies who may not reinsure or lay-off their risks with others - for whatever reason. In certain countries it is obligatory to buy insurance from "national insurers" and thus rely upon the full faith and credit of the sovereign state concerned.

4.11. These guidelines will segregate the required insurances into "marine" and "non-marine" classes and sub classes.

SECTION 5 - TRANSPORTATION INSURANCE

5.1. It is common to see foreign participation in the purchase and start-up of an industrial plant.

5.2. Irrespective of the nature of the purchase contract - be it full turnkey, part turnkey, separate direct contracts, project management, etc. - foreign participation is common in almost all phases of the project.

5.3. The procurement, transportation and delivery of goods, materials and equipment, by or through foreign entities each contain very real risks not least of which relate to the possible physical loss or damage to such items.

5.4. This is the subject of transportation or "marine cargo" insurance which is a highly developed form of insurance.

5.5. Basically this insurance pays for "cargo" which is lost, damaged or destroyed in transit or in storage connected with the transit.

5.6. Transit can be by land, sea or air; in any form of conveyance.

5.7. A variety of choices exist relating to the actual amount of insurance purchased. For the purposes of these guidelines these could be:-

(A) Actual invoice cost plus freight and other charges.

(B) The total costs of (A) plus a fixed percentage to allow for inflation during the replacement period - this is known as Increased Value or "I.V."

(C) Total replacement value. This is rarely used and difficult to assess but it can be applicable where a major item which is lost or damaged would take an unusually long time to replace at noticeably increased cost.

5.8. Who should buy transportation insurance? This depends upon the conditions of sale.

Where a sale is arranged upon an FOB ("free on board") basis the seller's interest in the goods ceases once they are loaded aboard the conveyance. Thus the seller's risk of loss or damage to the goods is limited to transits up to the FOB point. Thereafter the buyer is responsible for the goods and buys insurance accordingly.

Where a sale is arranged upon a CIF ("cost, insurance and freight") basis the seller is responsible for arranging transportation, delivery and insurance and should purchase full insurance accordingly.

5.8. (cont)

Alternatively the seller may be saddled with the responsibility to deliver the goods while the buyer prefers to arrange insurance; thus the sale would be effected on a C&F ("cost and freight") basis.

5.9. With the advent of containerization it is preferable that wherever possible a single transportation insurance policy is arranged from suppliers' premises right through to final destination.

This greatly simplifies otherwise serious problems where more than one insurance policy may exist, each covering a portion of the total transit; damage is discovered upon inspection at the final destination and it is not known exactly where the damage occurred. This results in arguments between insurers with each trying to pass over the claim to the other.

This situation could be otherwise avoided only by having the goods inspected at various loading and unloading points which is both costly and time-consuming.

5.10. Various forms of transportation insurance can be obtained:-

(A) The widest or most comprehensive form of marine cargo insurance is the "all risks" coverage. This is very broad but the title can be misleading as "all risks" policies do not include losses of an inevitable nature or where no accident occurs. This is the most expensive type of transportation insurance and includes the risks of theft and pilferage.

Technically such insurance is based upon The Institute Cargo Clauses (A).

(B) The Institute Cargo Clauses (B) provide slightly less coverage and are cheaper to buy.

Under these Clauses cover is restricted to the loss of or damage to goods caused by:-

(B)i fire or explosion.

(B)ii the stranding, grounding, sinking or collision of the vessel or craft.

(B)iii the overturning or derailment of land conveyance.

(B)iv the collision or contact of vessel, craft or conveyance with any external object.

(B)v discharge of cargo at a port of distress.

5.10. (B) cont.

(B)vi earthquake, volcanic eruption or lightning.

(B)vii general average sacrifice.

(B)viii jettison or washing overboard.

(B)ix entry of sea, lake or river water into the vessel, craft, hold, conveyance, container, liftvan or place of storage.

(B)x the total loss of any package lost overboard or dropped during loading on to, or unloading from, a vessel or craft.

(C) The Institute Cargo Clauses (C) provide similar coverage to (B) above except that coverage is not included for the risks detailed above under (B)vi, (B)ix and (B)x.

5.11. Where goods are carried by air the Institute Cargo Clauses (Air) are available. These provide similar coverages to those outlined under 5.10. above. The Clauses are suitably amended and the General Average Clause is deleted.

5.12. Care must be taken to make sure that an adequate amount of insurance is maintained while goods are temporarily stored at any location in connection with the transit.

This is important as an accumulation of goods at any storage point enroute is common depending upon the availability of shipping, temporary port closures, customs delays, etc.

5.13. Transportation insurance should extend to cover War Risks. Insurance underwriters will provide a separate cost for War Risks and it is important that where the seller is obliged under contract to provide and maintain transportation insurance the contract documents should clearly show that the insurance required be extended to include War Risks.

5.14. It is quite in order for either the seller or the buyer to arrange adequate insurance in respect of all shipments from any country of supply to final destination.

5.15. Upon completion of the transit, unloading and unpacking it is normal for separate "direct loss or damage" insurance to provide continuation of coverage for the goods received whilst on site, during construction, erection and testing and until final handover.

The on-site coverages are discussed in Section 6 of these guidelines.

SECTION 6 - INSURANCE OF THE WORKS ("DIRECT LOSS OR DAMAGE")

6.1. In Section 5 the insurance of materials and equipment in transit was discussed; this Section will consider the insurance of these items while on-site and following unpacking.

6.2. Losses incurred on-site could well be even larger than those encountered during transportation to site in view of the build-up of values.

6.3. Following arrival on site and during storage, construction, erection, installation, testing and commissioning, the materials and equipment, whether incorporated into the "works" or not are susceptible to numerous perils, i.e. fire, explosion, storm, earthquake, flood, accidental damage, collapse, subsidence, theft, etc.

6.4. Anything more than a minor incident could well hinder the progress of the work at hand and prove very costly to remedy. Furthermore a considerable delay in completion of the project could result in the loss or forfeiture of potential supply contracts.

6.5. The insurance industry is well able to respond to this situation by insuring the "works" against such events and in addition can insure against the financial consequences of a delay in plant start-up where such delay results directly from the damage incurred. (See Section 8)

6.6. Direct loss or damage insurance is commonly referred to as "Contractors All Risks Insurance" or "Contract Works Insurance" or "Builders Risk Insurance" (North American title). Depending upon the nature of the works involved it may be called "Erection All Risks Insurance".

6.7. This type of insurance policy is designed to apply to the whole term of the project from the breaking of ground and the arrival of materials and equipment on site right through to final handover and, to a lesser extent, the completion of maintenance.

6.8. It is common for either the seller or the buyer to purchase and maintain contract works insurance depending upon the desire and ability of each but as previously stated this obligation should be clearly shown in both the tender documents and the purchase agreement.

6.9. Whichever party has this responsibility he must make sure that the policy is issued in the joint names of the buyer and the seller as, due to staggered payment obligations by way of progress payments, each party has an "insurable interest" in both the work performed and the materials on site.

6.10. It is possible under such a policy to include as "additional insureds" any other party who has an insurable interest in the work as it progresses. However, one party - usually the party purchasing the insurance and paying the premium - is considered to be the prime insured.

6.11. Banks, including Development Banks, other Lenders or Mortgagees and sub-contractors may all be included as additional insureds under construction "direct loss or damage" policies as they could all stand to lose money if the works are damaged and thus they have an "insurable interest" in the project.

6.12. Most often sub-contractors do not appear as named insureds as the main contractor is most likely responsible for the work of sub-contractors and recompense for remedial work performed would be a matter for inclusion in sub-contract agreements.

However the contract works insurance should definitely include the value of all work undertaken irrespective of which participant actually undertakes the work.

6.13. The coverage provided is basically a form of "all risks" insurance and should relate to all work executed and all materials, goods and equipment on or adjacent to the site and intended for incorporation in the works.

This can of course include all form work, false-work and temporary structures and accommodations although should any of these items be and remain the sole property of the seller or contractor then it would be preferable to omit such items as they could be separately insured by the seller or contractor - see Section 7.

6.14. The term "all risks" insurance is not exclusive. Such policies do not provide coverage where losses result from:-

- War, civil war, rebellion, etc.
- Confiscation, expropriation or seizure by government entities.
- Loss of or damage to property insured caused by defective design, materials or workmanship.
- Loss of property by disappearance or shortage and discovered when an inventory is made.
- Normal upkeep or normal making good.
- Inherent vice, wear and tear, rust, mildew or other deterioration.

Insurers may seek to exclude other types or causes of loss; efforts should be made however to obtain the insurance deemed essential and this obviously would have an effect on the insurance premium charged.

6.15. The currency of "contractors all risks" or "contract works" insurance is very important. Where there is significant foreign content and local currency is not freely convertible every effort should be made to obtain "hard currency" insurance coverage.

This may be difficult for a local insurance organization to provide unless specific hard currency reinsurance is obtained from outside the host country. As it is common for the major international insurance companies to consistently provide hard currency insurance their potential participation should be considered early-on and the tender and purchase contract conditions should best state the currency to be used whether this particular insurance is to be obtained and maintained by the seller or the buyer.

6.16. It is permissible for such "on-site" insurance policies to be specifically endorsed to clearly define who and in what order, if necessary, the beneficiaries of claims payments will be.

6.17. As "contractors all risks" or "contract works" policies provide protection for the loss of or damage to the "works" it is possible to extend this type of coverage to loss or damage caused by testing of machinery, equipment or the whole process apparatus.

Depending upon the type of plant involved and the specific nature of the machinery or process the "testing risk" is often assessed to be the heaviest project risk. The testing of turbines is of particular concern to insurance underwriters and often separate and onerous terms are imposed in this respect.

6.18. Insurance underwriters habitually take the position of providing insurance coverage only for the major or catastrophe type of testing risks. In other words, this type of insurance policy may well exclude smaller items of loss or damage caused during testing as insurers may consider these to be virtually inevitable. Certainly meaningful "excesses" or "deductibles" are often applied which have the effect of removing insurers from the smaller incidents and leaves them covering only the larger losses where they exceed the amount of the "excess" or "deductible".

6.19. Normally these direct damage policies remain in force until final handover of the plant when annual operational insurances, purchased by the buyer, take over. There are variations; coverage may cease for portions of the work, as handed-over or at provisional handover or at other stages. Whenever it may be it is important that all parties to the contract know and understand this and arrangements are properly made at the inception of the purchase contract.

6.20. Although the policy ceases at handover an automatic time extension is usually given. This is a limited form of coverage and provides protection to the works or plant should damage be caused thereto by the seller, his contractors or sub-contractors while undertaking on-site work in the performance of their maintenance obligations in accordance with the purchase contract.

6.21. Very few new projects are completed and handed over at the original contract price. Variations and/or change-orders are common and numerous. Cost overruns may be considerable.

The value of work completed can easily exceed the amount of insurance carried. Although usually based on the estimated contract price the amount of insurance provided may be exceeded well before the project is completed. Much care should be taken to make sure that an adequate amount of insurance is in force during the course of the project so that valid claims can be fully met by the insurers who take the attitude that risks which are partially insured result in claims which are partially paid.

6.22. As earlier mentioned "contractors all risks" or "contract works" policies normally show an amount of insurance which reflects the estimated contract price. At the end of the project the final contract price is declared to the insurers who then recalculate the insurance premiums and either charge more premium or return a portion of the premium to the insured as the case may be, depending upon whether the declared amount is greater or lesser than the original figure.

6.23. Despite this premium adjustment exercise it must always be remembered that the insurers will not pay more than the amount of the insurance appearing on the policy. Thus this should be kept up-to-date in accordance with 6.21. above.

SECTION 7 - INSURANCE OF THE SELLER'S OR CONTRACTOR'S EQUIPMENT AND PROPERTY

7.1. This is best kept quite separate from the insurance detailed in Section 6. Often this insurance is added to or forms part of the "Contractors All Risks" or "Contract Works" insurance discussed in Section 6 but as these items are normally the sole property of the seller or contractor it is preferable for him to arrange his own separate insurance accordingly.

7.2. It is important that the buyer sees this is done and is provided with appropriate evidence.

Severe damage to or the total destruction of a key piece of construction equipment may not only result in a considerable delay to the project schedule but could possibly seriously affect the financial capabilities of the seller or contractor.

7.3. The provision of proper insurance coverage will ensure financial capability and should enable the early replacement of equipment.

7.4. Such mechanical plant, equipment, materials, temporary buildings and accommodations should be insured during transportation to the site, during erection and operation until final removal from the site.

7.5. This insurance is usually provided under "all risks" conditions and is based upon the actual cash value of the items in question.

Alternatively "replacement value" insurance may be obtainable. This has the effect of providing "new for old" when equipment or property is totally written-off. Such insurance is more expensive to buy as the premium rate has to be applied to the estimated replacement value of the property which inevitably will greatly exceed the actual cash value of the property involved.

7.6. Under this type of insurance the insurers mostly will not pay for minor damage or losses of a nuisance value and which the owner may well be able to handle himself.

7.7 It is unusual for insurers to provide coverage for the costs of repair to machinery or plant which suffers a mechanical breakdown. The loss of or damage to these items must result from extraneous events.

SECTION 8 - BUSINESS INTERRUPTION INSURANCE ("DIRECT LOSS OR DAMAGE")

8.1. Sections 5, 6 and 7 provide guidance as to the types of insurance available to cover the loss of or damage to goods and materials in transit, the project works and the equipment and temporary property on-site.

8.2. Depending upon what exactly is lost or damaged either in transit to the site or on the site itself it is possible that such loss or damage may have a serious effect upon the progress of the project. Severe resultant delays may follow.

8.3. During contract negotiations much will evolve around which party is responsible for project delays. The seller attempts to stand aside from all responsibility for delay; the buyer will try to pass all responsibility to the seller. All purchase contracts contain some element of compromise.

8.4. Irrespective of the final outcome of contract negotiations and despite how the purchase contract addresses the question of responsibility it is possible for whichever party who has an "insurable interest" in a project delay to obtain some insurance protection to cover his potential financial losseswhich result directly from such delay.

8.5. It is not possible to insure against the financial consequences of a project delay in all events. The non-performance by one party which results in extra costs or contract penalties being awarded against that party cannot be protected by insurance purchased by and in favour of that party.

However it is possible to insure against potential financial losses resulting from a project delay caused by the risks of direct loss or damage as mentioned in 8.2. above.

8.6. Both the "Marine Cargo Transit" and the "Contractors All Risks" or "Contract Works" policies are often extended to provide "Business Interruption" coverage. Where such insurance applies to a completely new project which has no production history this is often referred to as "Delayed Start-up" insurance or "Loss of Advance Profits" insurance.

Other generic terms exist and as ancillary incurred costs can also be covered under this class of business insurers habitually issue insurance policies directed toward "Project Delay" insurance, "Additional Costs of Working" and "Extra Expenses" insurance.

8.7. The actual terms used are in themselves not critical. For the purposes of these guidelines the paramount objective is to determine at the time of tender, or well before that, just what financial effect

8.7. (cont)

the loss of or damage to goods and materials, or the works in course of erection, construction, installation, testing or commissioning would have to the buyer or seller inter alia and whether such effect could be comfortably borne by either or both.

8.8. This demands a careful element of risk analysis.

8.9. Whatever the resultant potential losses are estimated to be it is of vital importance that the insurers approached be made fully aware of the details and make-up of these losses.

8.10. Under business interruption insurance insurers can be very accommodating and provided the financial losses stem from one or more of the direct loss or damage perils covered by transit or on-site insurance policies they are usually able to insure such losses.

8.11. Payment under such policies can be made in a variety of ways from flat pre-agreed sums to amounts calculated on a time basis i.e. certain sums payable per week, per month or half-yearly. An overall time limit is imposed.

8.12. Of critical importance under such insurance is the demonstrated ability of the purchaser of the insurance to be able to fully detail and prove his actual losses.

Insurers will not entertain any proposal where this is in doubt.

SECTION 9 - LIABILITY INSURANCES

9.1. Whereas the insurance of owned property against loss on damage is earlier referred to as "direct loss or damage insurance" the insurance of damage or injury caused to other peoples' property or to other people themselves is generally called either "third-party liability insurance" or simply "liability insurance".

9.2. More specifically the term "liability insurance" is split into generic terms applicable to the risks attaching to the operations undertaken by the insured i.e.;

- aviation liability insurance
- marine liability insurance
- automobile (or motor) liability insurance
- products liability insurance
- general liability insurance
- professional liability insurance
- employers liability insurance
- etc.

9.3. For the purposes of these guidelines, and as they relate to the risks attaching to the purchase, implementation and start-up of industrial plants, the terms "general liability insurance"; "professional liability insurance", and "employers liability insurance" will be used.

9.4. All liability insurance policies have common elements. They all provide protection against the possibility of claims being made against the insured should he be accused of negligently causing damage to third party property or injuries to third parties.

All liability policies are directed to the question of negligence; this has to apply. Insurers will not pay for claims resulting from deliberate acts, and they will not support insureds who are continually negligent and act imprudently.

All liability policies contain "limits of indemnity" which are the maximum amounts payable by insurers for either a single claim or the total of all claims in any one period. Insurers cannot pay more than the indemnity limit or limits appearing on the policy.

9.5. The question of the currency of this class of insurance is not so important to the insured as is "direct loss or damage insurance" as, despite whichever currency is used for the payment of the insurance premium, the insurer must face the possibility of paying third-party claims to third-parties in a variety of currencies depending upon the currency of the claim made by the claimants.

9.6. The following sections will briefly summarize the varieties, and relevant types of liability insurance mentioned above and will emphasize key points of importance in the purchase and maintenance of proper adequate protection.

SECTION 10 - GENERAL LIABILITY INSURANCE

10.1. It is essential that both the buyer and the seller maintain "general liability" or "general third-party" insurance. The financial consequences of serious events causing third-party injuries or damage can be sufficient to not only prevent the progress of a project but could result in the financial failure of project participants.

10.2. As liability insurance policies can cover more than one party it is usual for the buyer and the seller to both be insured under one policy issued in the joint names.

10.3. The tender and contract documents should clearly state which party is to obtain such insurance and is to keep it in force. Should the seller become the purchaser then he should separately show the insurance premium costs in his tender and later provide evidence to the buyer of premium payment.

10.4. Tender and contract documents should also state the amount of insurance, called the "limit of indemnity", to be obtained. If this is not done it is possible that a seller, in order to present a competitive price, could buy minimum coverage which could prove to be totally insufficient later.

10.5. It is difficult to select a limit of indemnity. Much depends upon the type of plant purchased, the location of the project in relation to surrounding property, the peculiar nature of construction work involved and the number of participating entities on site.

10.6. Liability insurers have to consider whether a project is susceptible to causing high risks such as fire, explosion, collapse, vibration, release of gases or chemicals any of which could result in major injury or damage to third parties and/or their property.

The use of explosives, heavy machinery and cranes may present particular hazards where the site is close to neighbouring property.

10.7. Although a liability policy may cover more than one party each is considered to be a third party to the other and claims between insured participants are covered by insurers who take the stand that coverage applies as if a separate policy had been issued to each party.

10.8. Thus it is technically possible to also include under such policies the liability risks of sub-contractors. While this is often done there and both advantages and disadvantages to doing this.

On the one hand a single policy could "wrap-up" all project participants and simplify the purchase of insurance thus avoiding the inclusion of insurance premium costings in a variety of sub-contracts. The insurer involved would underwrite on the basis that he is in effect issuing numerous separate insurances - but all under one policy - and would assess the premium accordingly.

On the other hand insurers may not be keen to underwrite the liability risks of everbody and prefer to be less exposed. Similarly sub-contractors may prefer to buy or use their own existing insurance policies arranged with people with whom they have maintained an excellent business and claims relationship.

10.9. Whichever method is chosen evidence of adequate insurance must be provided whether from the seller to the buyer - or vice-versa and from sub-contractors to the seller.

10.10. Liability policies purchased should be extended to include any extraordinary liabilities accepted by or imposed upon an insured by another party such as "Indemnities to Principals" or "Hold Harmless Clauses".

10.11. Insurance should whenever possible be purchased from financially sound insurers and should be in force at an early date so that coverage applies when the insured party commences his project obligations.

Similarly coverage should not cease until his project obligations, including any maintenance responsibilities, are fully completed.

10.12. It is quite common for insurances to impose a "deductible" or "excess" in respect of small property damage claims of a nuisance value. However small claims are usually fully handled by insurers where bodily injury to third-parties is concerned.

10.13. Chemical plants pose major liability problems as the possibility of bodily injury claims can be very real and the aggregate of numerous claims made may be enormous. As the seller and/or his sub-contractor may be proven to be negligent in causing a major incident it is imperative that a considerable amount of liability insurance be purchased and fully maintained. Obviously the cost of purchasing such insurance protection can be very heavy and should be taken into consideration at the time of tender.

SECTION 11 - PROFESSIONAL INDEMNITY INSURANCE

11.1. Known most widely as professional indemnity insurance the subject is also called "errors and omissions" insurance in some countries, particularly in North America.

11.2. The purpose of this insurance is to protect professional organizations and their employees against their legal liability to compensate third-parties who incur injury or damage due to their professional negligence.

Thus the question of negligence is paramount.

11.3. This specialist form of insurance is purchased by those engaged in a professional capacity i.e. engineers, architects, accountants, lawyers, doctors, etc.

11.4. Such professionals hold themselves out to be experts in their field and the contracts of service they enter into with others imply that they will exercise reasonable care and skill in performing their services. A failure to do this leaves the professional open to a suit for professional negligence.

11.5. It must be emphazised that the professional's liability is not limited to his client. While this may be his primary liability he is also liable to those third-parties who are outside his contract.

11.6. The whole question of the proper performance of an industrial plant is critical to the purchaser of the plant. The buyer contracts to purchase a plant under specific conditions which include, most importantly, initial and final performance criteria.

Having paid, or having agreed to pay, for the professional services specified then the buyer obviously wishes to retain rights of recourse against the professional should his services prove to be faulty.

11.7. Consulting engineers and architects carry heavy professional responsibilities; the consequences of their negligent acts can be enormous. Similarly organizations holding themselves out to be "contract or project managers" can be deemed to be professionally responsible, and thus negligent.

11.8. While the professional's liability to his client may be heavy his potential liability to other third-parties may be even heavier particularly in the case of chemical or similar plants where injuries resulting from the release of toxics can be very widespread.

11.9. Most consulting engineers and architects work for fees and maintain comparatively small assets. Thus successfull claims for negligence could easily destroy their practices. Their need for adequate insurance protection is often vital to their survival. Despite excellent records and prudent operation the costs of simply defending a court action could be too heavy to bear.

11.10. Thus the buyer of an industrial plant should demand that his professional contractors maintain adequate insurance and provide evidence that this has been done.

The question of "adequate" insurance is tricky as the purchase of high indemnity limits is both difficult and expensive. As professionals invariably pass insurance premiums on to their clients a buyer may find himself saddled with the payment of heavy sums in order to get the overall protection needed; but the consequences are too important to ignore.

11.11. Tender and contract documents must clearly define the amount of insurance to be carried so that this can be taken care of at the earliest stages of contract tender or negotiation.

The buyer who finds that his professional bidder cannot obtain insurance at least has the comfort of learning that such a bidder may be inexperienced or most probably has a poor claims record and has not previously exercised reasonable care and skill.

11.12. During the term of the project the buyer should ensure from time to time that professional liability insurance has remained in force and still applies.

11.13. As mentioned earlier in these guidelines buyers should beware of attempts by professionals to limit their overall liability under a contract to "the amount of insurance carried" or something similarly phrased. This manoeuver is often attempted.

On the one hand the amount of insurance may be totally insufficient and on the other hand should the professional allow his insurance to lapse then by implication he is free of liability under the contract.

11.14. It must be emphasized that comparatively few insurance companies will issue professional liability policies. This in itself tells a story; claims can be frequent and heavy leading insurance companies to decline this business.

Thus professionals, once insurance has been obtained, tend to "take this insurance with them" wherever they go and it may be quite futile in demanding that a professional buys a separate policy specifically for the project-especially in the country of the project-as it most probably will be unobtainable.

SECTION 12 - EMPLOYERS LIABILITY INSURANCE

12.1. In many jurisdictions employees are permitted to seek claims for damages against their employers under common law. Employers may therefore be held legally liable to their employees who sustain injuries or illness arising out of their employment.

12.2. Such potential liabilities are insured against by the provision of an employers' liability policy.

12.3. General liability insurance policies exclude claims in respect of employees who, under such insurance, are not considered to be "third-parties", thus the need for a separate form of insurance.

12.4. As legislation relating to the injury to or illness of employees varies from country to country it is not possible to be specific on coverages available but there are common elements.

12.5. It is common for employers liability policies to cover against claims which are not limited to accidental bodily injury; as noted above policies include claims for illness and would also respond when an injury is alleged to have been caused over a period of time during an employee's years of service.

12.6. In many countries employers liability insurance is part of governmental social security programs. Coverage is very often provided as an extension to a national workmens compensation insurance program.

12.7. In other countries claims under common law are not permitted; the benefits payable to employees under State social security programs are considered to be sufficient.

12.8. While it would be comparatively simple for the buyer of an industrial plant to make sure that local contractors or project participants obtain adequate employers liability insurance under a local program and include relevant costs in tender and contract prices the question of foreign sellers or participants can be more complicated.

12.9. Again as national regulations vary so much, for the purpose of these guidelines, it should be sufficient for the buyer to be prudent and make sure that all foreign project participants be asked to carry employers liability insurance and to provide evidence that this is done.

12.10. This may engender a response to the effect that employees of a given foreign participant are not permitted to sue their employers under pertinent legislation but at least the buyer will then know that exposure does not exist.

12.11. It is important however that the position of "third country nationals" be explored, i.e. a foreign participant may hire a sub-contractor or specialists from another foreign country where legislation permits common-law claims. The buyer should make sure that adequate employers liability is obtained accordingly.

12.12. The failure to maintain adequate coverage is important in the event of an injury to key employees or to many employees at one time. A sinple uninsured incident could result in heavy claims being awarded against the relevant employer resulting in financial default leading to non-performance.

SECTION 13 - TENDER AND PERFORMANCE BONDS OR GUARANTEES

13.1. Buyers of industrial plants run the risk of a seller, contractors, sub-contractors or suppliers failing to perform their contracted obligations.

The term "failure" is all-embracing; a participant may not be able to perform due to a variety of reasons including financial default. In any event the buyer needs some form of guarantee that what he has contracted to buy will be provided.

13.2. The general insurance industry is geared to providing such guarantees by way of "surety bonds". These should not be confused with guarantees provided through banks which while providing the buyer with comparable protection are commonly referred to as "guarantees" as opposed to "bonds" and regularly infringe upon the bonded party's line of credit with his bank.

13.3. Insurance companies specializing in this field are able to provide tender or bid bonds, performance bonds, supply bonds, labour and material bonds, maintenance bonds, etc.

13.4. All have a common element, i.e. one party is guaranteed by the insurance or "surety" company that another party will perform his contractual obligations.

13.5. "Bonding" is not pure insurance, i.e. it is not a contract of indemnity between two parties. In this class of business three parties are involved, the party requiring the issue of a bond (the "obligor") the bonded party (the seller, contractor or supplier) and the insurance or surety company.

Furthermore the surety company necessarily takes a "counter indemnity" from the bonded party thus having an element of financial recourse against him should he fail. If failure is due to bankruptcy then this recourse may not be worth very much as the surety stands in a relatively unsecured position behind all secured creditors including banks.

13.6. Nevertheless it can be seen that insurance or surety companies will provide bonds only to entities which are "bondable", i.e of sound financial standing and with a good record of performance.

13.7. By providing counter indemnities to the surety company it is obvious that any bonded party is limited in the aggregate amount of bonds he can obtain and which are in force at any one time. On the other hand the provision of a bond as opposed to a financial guarantee issued by a bank does not infringe upon the bonded party's credit standing with his bank.

13.8. BID OR TENDER BOND - ensures that a bid is made in good faith and that the surety will later issue a performance bond should the bid be successful. If however the bidder should fail to take up the contract the surety is responsible to the obligor, also called the "principal" in some countries, to pay the difference between the amount of the tender and the new price at which the contract may be awarded to another bidder. The amount of the bond is set by the buyer or obligor and usually the bidder includes the cost of obtaining the bond in his tender as a separate item.

13.9. PERFORMANCE BONDS - this type of surety bond is exactly what the title says, i.e. it is a bond which guarantees the contracted performance of the bonded party. In the event that the bonded party fails to perform his contractual obligations for any reason then the surety company is obliged to either complete the work or contract or to pay such amounts as needed to ensure completion up to the limit of the amount of the bond.

Here again the amount of the bond is set by the buyer and the cost of obtaining the bond is usually included in the contract or purchase price.

13.10. SUPPLY BOND - this is virtually the same as a performance bond but the term is used where a bond is needed which guarantees only the proper and timely delivery of goods and/or services.

13.11. LABOUR & MATERIALS BOND - this type of bond is common in North America but it is used and has application in other areas of the world. In simple terms the seller or contractor is asked to supply a labour and material bond, often as an addition to a performance bond, so that in the event of the failure of the seller or contractor sufficient monies become available from the surety to make good sums properly due to sub-contractors for work performed or expenses incurred by them and which would otherwise be unrecoverable.

13.12. MAINTENANCE BOND - Such bonds are not called for as frequently as performance bonds but are demanded by buyers on those contracts where an extended period of maintenance exists or where the maintenance obligations are extremely important to the initial operation of an industrial plant.

The bond simply guarantees that the maintenance obligations will be undertaken by the bonded party and may also be extended to guarantee the satisfactory functions of the completed work for a specified period.

13.13. It is important that both the tender and purchase contract documents clearly detail the type, amount and duration of all bonds required. Also the documents should state which party will be responsible for the cost of obtaining the bonds.

13.3. (cont)

Should the buyer wish to ensure that sub-contractors and/or suppliers also obtain and provide performance or supply bonds then this also should be clearly stated in the top contract(s) thus making the seller or contractor responsible to the buyer that such bonds will be provided.

13.14. BANK GUARANTEES - which are increasingly required in lieu of performance or contract bonds are often of an "on-demand" nature payable at first call by the obligor. This form of guarantee may well be considered as preferable by the buyer as the amount of the guarantee is immediately payable to him on first demand.

However, the seller's financial ability may well become seriously impaired by the provision of this type of guarantee as his operating line of credit at his bank is affected. Thus such guarantees while obtainable from only the strongest sellers have the effect of reducing the number of bidders interested.

Furthermore insurance or "surety" companies will only very rarely provide protection to a seller or a contractor where he has provided an on-demand guarantee which may be called by the obligor without qualification.

SECTION 14 - PRODUCT GUARANTEES

14.1 It is generally not possible to obtain insurance which covers the owner of an industrial plant should the plant not properly perform unless performance is affected by an incident of "loss or damage" or by mechanical breakdown.

14.2 Other sections of these guidelines address the purchase of "business interruption insurance" which applies to damage or mechanical break down incidents.

14.3 A buyer of an industrial plant does have the means of financial protection where none or partial performance is encountered. These usually are contained in the purchase contract itself and may take the form of:

- penalties for delayed completion;
- penalties for non-performance;
- liquidated damages;
- performance guarantees.

14.4 Section 13 has outlined in simple terms the various types of performance bonds in wide use and which provide the buyer with a certain amount of financial protection. Additionally a warranty of performance obtainable by the buyer from the seller imposes a contractual liability upon the seller to make good his work at his cost until acceptable performance is met.

14.5 Thus the seller may well face an overall onerous position as he has to face the possibility of having to pay stated contractual penalties and/or liquidated damages plus his costs incurred under warranty and possibly the calling of any performance bonds or guarantees he has provided.

14.6 While trying to present a competitive contract price to the buyer, the seller has the problem of nevertheless covering-off the potential costs of at least some of these liabilities in his price.

Similarly the seller will negotiate acceptable penalty limits and attempt to restrict his overall liabilities.

14.7 A seller will invariably not accept liabilities relating to any consequential losses incurred by the buyer and resulting from non-performance.

The insurance industry at large is very reluctant to provide coverage for such consequential losses.

14.8 Insurers take the view that the buyer has other means of recourse i.e. the penalties, guarantees and warrantees mentioned above and has the ability to take action against others who may allegedly have contributed to the non-performance in question i.e. the consulting and other professional engineers, project managers, etc.

As such professionals would most probably carry professional indemnity insurance it can be seen that insurers rightly or wrongly, consider that their exposures in this whole area are great enough.

14.9 Ironically, while it is virtually impossible in interesting insurers in covering the buyer's consequential losses due to non-performance, which does not result from physical damage or mechanical breakdown, it has been possible in the past for the seller to obtain insurance which covers his obligations under warrantees given.

14.10 This situation is particularly annoying to buyers as the seller, having negotiated himself contractually out of accepting any consequential loss liabilities, can insure his remaining "make good liabilities" contract or his warranty whereas the buyer who has had no part in the performance failure remains unprotected outside the limited contractual means of recourse he has and as mentioned above.

14.11 Thus a major financial exposure remains as far as the buyer is concerned i.e. the question of his potential consequential losses resulting from plant non-performance cannot at present be protected by insurance unless an incident of plant damage or mechanical breakdown is the cause.

SECTION 15 - COMPLETION OF PLANT: ON-GOING INSURANCE

15.1. Upon hand-over of the plant it fully becomes the property of the buyer or owner. Thus any responsibility which the seller, and/or his project participants, may have had to provide insurance now ceases.

15.2. The buyer now has the responsibility to prudently protect the plant and its continuing operation. Similarly the buyer must protect himself from the consequences of third-party claims for injury or damages alleged to be caused by the operation of the plant or by products produced by the plant.

15.3. Here again the same principals of "direct loss or damage" insurance and "liability insurance" apply.

15.4. Most countries now have appropriate legislation relating to the purchase of insurances by citizens of the country.

15.5. It is important that the relevant legislation is not breached as serious penalties may apply.

15.6. As far as the general insurance industry is concerned legislated restrictions on the purchase of insurance either inside or outside the country of the buyer, and thus the "country of risk", can be very briefly placed in the following groups:

(A) countries which maintain only nationalized insurance industries where insurance must be obtained from a designated state organization;

(B) countries which maintain both state and private domestic insurance organizations and where insurance must be obtained locally from any of these;

(C) countries which while maintaining both state and private domestic insurance organizations permit insurance to be purchased outside the country but apply financial penalties for doing this;

(D) countries which freely permit the purchase of insurance inside or outside the country.

15.7. Normally a caveat applies in those countries which do not freely permit the purchase of foreign insurance i.e. should the local insurance industry be unable to fully provide the coverage needed, either by type or by amount, then permission is normally given to purchase additional insurance from outside the country.

15.8. It may be necessary for the owner of a major industrial plant and especially one which carries a high liability risk factor e.g. a chemical plant, to seek professional advice on the construction and maintenance of an adequate insurance program as it will probably be necessary to involve many insurers some of whom may be foreign.

15.9. Briefly the owners must obtain adequate property and the ancilliary business interruption insurances on the plant itself.

This should be supplemented by "boiler and machinery" or "engineering" insurance, again extended to include business interruption risks.

An adequate amount of general and product liability insurance should be obtained and kept in force.

Other additional insurances are necessary and in most countries are compulsory i.e. automobile or motor third-party liability insurance and workmen's compensation and employers liability insurance.

15.10. Property insurance is fairly straightforward and is really an extension of the "contract works" insurance applicable during construction and installation.

Standard forms of coverage usually apply country-by-country and provide basic fire and lightning coverage. This may be extendable to cover damage to the plant caused by other perils i.e. explosion, flood, earthquake, windstorm, hail, aircraft, etc.

It is essential that the full value of the plant be insured preferably on a "replacement value" basis and especially where replacement would involve foreign supply. Consideration here should also be given to the insurer's ability to meet such costs in a convertible currency.

Property insurance premiums, usually payable annually, are not expensive considering the amount of coverage currently needed. Premiums are calculated on the probability of damage occurring and any loss-prevention facilities provided either in or adjacent to the plant.

15.11. The property insurance policy should be extended to include "business interuption" or "loss of profits" insurance. This is vital.

15.12. Depending upon the items damaged and the nature of the damage it is quite possible that a business interruption loss could well exceed the cost of the physical damage replacement. Thus consideration should be given to the most sensitive loss which could cause the widest disruption of business.

15.13. The basis of business interruption insurance is the payment of gross profit, wages, additional costs of working, etc. Coverage applies where damage occurs and which is covered as a peril under the main property insurance policy.

15.14. Once in operation "boiler and machinery" or "engineering" insurance should be considered. Such insurance covers the explosion risks of boilers, air receivers or other pressure vessels and the breakdown risks of all forms of plant and machinery which have moving parts.

15.15. Here again these policies can and should be extended to cover business interruption risks as mentioned above.

15.16. It is possible to extend boiler and machinery or engineering insurance policies to also cover damages caused to surrounding property and to third-party risks.

15.17. General third-party liability insurance is necessary and is based upon the risks inherent in the business itself, not just the plant in question. Certainly the continuing operation of the plant may be the major liability risk factor in pursuance of the overall business but such policies apply to all aspects of the business as conducted.

15.18. Liability policies are issued on an annual basis on the same lines as the property and boiler and machinery policies. Renewal terms are assessed by the insurers prior to renewal date and take into account any changes in the business conducted and any claims reported during the current year of insurance.

15.19. In this class of business insurers often settle liability claims several years after the date of the original reported incident. The question of the amount of outstanding claims liabilities carried has a major affect on renewal terms offered or even whether renewal is offered at all in the event of a continual record of claims incidents.

15.20. Where products are sold to others it is common to buy insurance protection against claims for injury or damage made by the users or consumers of such products. This could of course include foreign users or consumers. Thus "product liability insurance" becomes necessary.

This insurance is most commonly provided as an extension to the basic general third-party liability policy mentioned above.

This particular insurance usually carries a specific limitation of indemnity i.e. the relevant insurance company will place a separate limit of liability coverage on the policy insofar as it applies to "product liability"; which means that the amount of money the insurer will pay to settle product liability claims is limited to a specific total amount in any one year of insurance.

15.21. Should this specific limit of indemnity be considered inadequate it becomes necessary to buy additional or "excess" insurance on top of the basic policy which then becomes the "primary" insurance policy.

It is often necessary to obtain such insurance outside the country of operation. See 15.7. above.

15.22. The purchase of automobile or motor insurance, workmen's compensation and employers liability insurances should be quite straightforward and in accordance with both local customs and regulations.

The owner of an industrial plant should also be guided toward considering the risks of employee fraud and customer default.

The first mentioned is the subject of fidelity guarantee insurance and the second is taken care of by credit insurance.

15.23. Fidelity guarantee insurance involves the "bonding" of specific employees who may handle cash, securities or other items of value in the course of their employment.

Insurers will consider coverage based on specific security-type information which has to be furnished by both the employer and the employee. Employees who do not meet the insurer's underwriting criteria will not be insured and thus are not "bondable".

15.24. Customer defaults can of course prove harmful to any business. Manufacturers and merchants seek credit insurance against the risk of non-payment for goods and/or services supplied on credit terms.

15.25. Credit insurance forms a specific class of protection; only a few privately owned insurance companies write this business. National governments operate credit insurance agencies in many countries but these are mostly directed toward exports and thus provide "export credit insurance".

15.26. In theory it is possible to insure on a "whole turnover basis" (all sales to all customers) or on a "specific account" basis (all sales to a single customer only, over a twelve month period).

15.27. The availability of credit insurance is limited; facilities may not exist in several countries and where they do there is a marked lack of competition and flexibility.

For the purposes of these guidelines it is recommended that specialist professional assistance be obtained in the search for credit insurance availability. This may very well involve insurers outside the country of the insured party and thus may entail the obtaining of any legislative authority necessary to accomplish this.

15.28. It should be noted that where goods and/or services are sold to foreign governments the risks of non-payment, export or import embargoes, unilateral contract cancellation or repudiation etc. all become the subject of "political risk insurance".

Here again it is recommended that professional assistance be obtained in the pursuit of specialist insurance protection via either governmental or private insurance organizations.

15.29. Depending upon the terms of purchase or sale of goods and supplies - an owner of a plant may have to obtain transportation insurance coverage on goods, supplies, products and equipment in course of carriage, including storage.

Section 5 describes this coverage in general terms; the principles apply equally to domestic transit risks although insurance on domestic transits is usually purchased on an annual renewable basis as opposed to "open-term" marine cargo insurance policies.

SECTION 16 - INSURANCE CLAIMS

16.1. It is important that proper care is taken in the reporting and subsequent pursuit of any claims or potential claims made against any insurance company or organization.

16.2. Of greatest importance is the necessity to report all claims to insurers as quickly as possible. It is quite common for insurance policies to contain a condition stipulating a time limit within which claims are to be made.

Insurers often attempt to deny claims which are reported late to them.

16.3. The possible lack of knowledge by the insured of an earlier incident is only small defence; insurers will often insist that the insured should or ought to have known.

Thus a proper reporting system should be organized by the insured.

16.4. Specific personnel should be appointed as the recipients of relevant information regarding any incident which may give rise to an insurance claim. This should include all areas of injury or damage whether to employees, other people or their property or to property owned or on-site.

16.5. Subsequently such information should be reported to insurers formally and fully by a designated individual or department.

16.6. The designated personnel should make themselves known to the insurance companies involved, or to the loss adjustors appointed by the insurance companies to assess claims on their behalf.

16.7. Equally important is the necessity to maintain claims diaries so that a record of all actions taken and the response of insurers and loss adjustors is properly kept.

16.8. Similarly the diary will notarize all further communications received from the claimant or claimants. Proper corresponding files should be set up and typed or written notes of all conversations or messages should be kept on the files with a note of the action taken.

These notes must be dated.

16.9. Where liability-type claims are involved, i.e. claims made against the insured by injured employees or third parties - or third parties who allege damage has been caused to their property - it is most important that the insured or any officer, employee or agent of the insured does not admit responsibility to the claimant or claimants.

16.10. This would have the effect of the liability insurance company losing its own rights of repudiation or consideration with the result that the insurance company may well then refuse to provide protection to the insured as the insurer's rights have been compromised.

16.11. Where there are incidents of damage to the insured's property - or to property belonging to his contractors or suppliers - caused by fire, storm, flood, collapse, breakdown, accidental damage or similar events the insured should make every effort to protect the property from further damage.

16.12. This should be done as quickly as possible and the insurers should be advised that this is being done. For instance a small fire can mean that property becomes open to the weather leaving machinery, equipment, goods and stock exposed to additional damage by rain or storm, etc.

If it is impossible to immediately protect such items the insurer should be told.

16.13. If the insured acts prudently in all respects then it is difficult for insurers to formally deny claims except for suspected fraudulent events.

16.14. Insurers attempt to keep their claim payment as low as possible but they are obliged to pay fully in accordance with the conditions of the relevant insurance policy or policies. It is possible and common for the insured to challenge the denial of claims or any otherwise unacceptable claims payment offered.

16.15. Where claims settlement difficulties are incurred it is suggested that the onus be put upon the insurer to fully and properly detail all his reasons for either denial or partial payment.

16.16. It is recommended that when information on the value or replacement value of damaged property is provided to the insurer or his loss adjustor as the case may be, the insured should include all costs and additional costs he considers relevant - thus leaving the insurer to revert back with what he considers to be outside the claim.

This invariably leads to negotiation but is preferable to either having submitted only partial loss figures or to having had to add to an earlier claim amount should an omission be discovered after a formal claim amount has been earlier submitted.

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SURVEY AND GUIDELINES ON JOINT VENTURE AGREEMENTS AMONG DEVELOPING COUNTRIES IN THE FERTILIZER INDUSTRY

Prepared by

the UNIDO Secretariat

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CONTENTS

		Page
Foreword		3
Chaper I:	Introduction	4
Chapter II:	Recent experience in international co-operation in the fertilizer industry	9
Chapter III:	Setting-up fertilizer joint ventures in developing countries	13
Chapter IV:	Obstacles and areas of potential conflict	25
Chapter V:	Conclusions and the outlook for international joint ventures in the fertilizer industry	30
Appendix I and II		39

Foreword

The concept of an industrial Joint Venture (JV) is not a new one. Yet, it is one which has seen relatively few applications in the context of assisting the fertilizer industries of developing countries. By way of comparison, such ventures in the petrochemical industry have proliferated and have often met with significant success over the last two decades.

This paper seeks to analyse the potentials, the problems and the prospects offered by this instrument of co-operation to the fertilizer industries especially of the developing world. It examines the role of industrial joint ventures between the developed and the developing countries, as well as between the developing countries themselves.

The study presents in Chapter I an introduction in which the international climate, with relevance to the operation of JVs, is examined.

This will lead to Chapter II where an overview of recent experiences in international co-operation with the fertilizer industries of the developing world is presented. This review should make apparent the current magnitude and nature of joint venture arrangement in the sector.

Chapter III, analyses the general rationale for industrial Joint Ventures, both from the Local Partner's and Foreign Partner's viewpoints. The major benefits and drawbacks of the concept of JVs is examined here.

Following this evaluation, Chapter IV seeks to identify the major obstacles and potential conflict areas which can develop with the planning, initiation, and progression of the Joint Venture process. In this chapter, the crucial role played by host governments in industrial Joint Ventures is highlighted.

Having examined the theoretical potential and practical problems facing the JV process, Chapter V presents conclusions and a general outlook for Joint Ventures in the fertilizer industry which also leads to the formulation of some general guidelines for joint ventures in the fertilizer industry of developing countries which could contribute to the success of such arrangements in developing countries.

I. Introduction

Historical Background

In examining the role of the industrial Joint Venture (JV) in the arena of international economic relations, it is useful to first make a general appraisal of the international economic environment as this is of direct relevance to this analysis.

Combinations of business interests, motivated by complementary interests or by defensive considerations such as the sharing of business and non-business risks, are nothing new. They were present even before World War I in the form of activity by large European businesses, such as the United Fruit Company, in many developing regions throughout the world. However, three significant features of these older JVs do emerge in contrast to the activity of those after World War II :

1. Earlier associations were almost entirely concerned with trade, mining or agriculture plantation in one form or another.

2. They existed often between partners from the same parent (i.e developed) country, or from different fellow colonial powers.

3. Local involvement in such business ventures was invariably subordinate to the foreign partners.

In the post World War II years, two significant changes were noticeable in the nature and organization of JVs :

1. A diversification of the manufacturing process,

2. The increased participation of local partners.

These features were largely brought about by a combination of two factors. On the one hand there was the arrival of major economic and political counterbalance to the power of the "traditionally" advanced nations. On the other hand, there was the growth of a more permissive political morality based on the changing social and cultural values on the part of the foreign powers which were active in the joint venture process. These have both led to the gradual dismantling of colonial authorities in many former colonies and developing regions. The ex-colonies, through resumed soverign responsiblilty and enhanced political status, have in the last two decades been more forceful in regulating foreign activity and protecting their national interests. This attitude has not been restricted to ex-colonial governments ; rather, it has also been evident in many parts of the developing world. Owing to the relatively fragile nature of their economic base and the limited developed internal resources, many DC governments have been attempting to bridge the gulf between their needs and their ambitions with the assistance of external technology and financial resources. Thus, it is in such a climate that joint ventures in recent years have diversified and integrated both horizontally and vertically along the manufacturing process.

With this background in mind, it is necessary to outline one further aspect of the changing international environment, namely that the climate prevailing in the 1980's and early 1990's is likely to be significantly different to that of the 1960's and 1970's. As such JV agreements

more feasible in the future.

The reasons for this difference are several :

1. The increasing value of developing country resources and markets for expanding TNCs;

2. The implications of TNC risk minimizing strategies;

3. The loss of traditional advantages held by TNCs through monopoly;

4. Increasing world trends towards greater participation;

5. The internationalization of inputs;

6. Increasing business competition.

Firstly, transnational corporations (TNCs) are playing an increasing role overseas and a larger share of their business will take place in the developing regions of the world. The DCs will therefore become more important for raw materials, manufacturing and sales. It would seem that whilst on one hand devloping country markets will no longer be treated as marginal, on the other hand the TNCs are displaying greater caution in every aspect of their involvements, short term or long, in order to safeguard their fundamental corporate interests concerning technology, reputation, quality, goodwill, and their investment return.

Secondly, the TNCs, which are have a valuable technological input to industrial joint venture agreements, are becoming more experienced in risk evaluation and risk minimizing strategies. This has important repercussions for DC governments which are often involved in luring and controlling foreign direct and indirect investment.

Thirdly, it is evident that in the long run, the spread of vital management skills pioneered and refined by Western corporations is inevitable across the international environment. This has been visible especially in the last decade. As a result, the advantages once monopolised by TNCs are being eroded and the corporations may see JVs as a feasible component of their overseas business plans.

Fourthly, a greater awareness and development of many forms of participative management seems probable in the light of the recent international environment. With increasing numbers of DC governments striving for a larger local role in participation and greater local control of foreign ventures, this may force the development of more JVs especially in the developing regions, as the Indian experience has shown.

Fifthly, owing to the increased global economic interdependence, world trade in the form of goods, services and capital, will continue to rise at a rate faster than world production. The implication of this is that the inputs into the manufacturing unit are more likely to be more international. Sales services are expected to follow a similar pattern. In this context there seems to be a feasible place for JV agreements to be enacted.

Sixthly, owing to accelerated development of and structural changes in the developing countries, in addition to the improvement of the market information services outside the TNCs and other manufacturing companies, world trade in goods,services (skills), technology and capital is becoming more competitive. As a result of this climate, the DCs may find more opportunities to form JVs both with the North (advanced nations) and indeed amongst themselves.

As the global economic system becomes ever more intricate in its operation, the old existing problems together with the newly emerging facets are creating new constraints which must be accounted for in any elaboration of international development prospects. Amongst the more important issues are slower growth rates in production, living standards which are either stagnant or growing too slowly, low consumption and investment levels, a structural crisis which is affecting about 25 per cent of the global industrial output, increasing international competitiveness, growing protectionism, spiralling inflation and international monetary difficulties. These factors will exert a considerable influence on the international scenario for atleast the 1980's and early 1990's.

What is an industrial joint venture

A true international industrial joint venture (JV) could be defined as a joint commitment for more than a very short time period (6 months) of funds, facilities, and services by at least two legally independent bodies towards the initialization and sustenance of an industrial enterprise for their mutual (or national) benefit. This relationship has been termed as one of "symbiotic marketing" (L.Adler, Harvard Review 1966), or, the notion of harmonious living together of dissimilar organisms and their joint role in the marketing function. However, the joint ventures as referred to in this paper do not constitute merely a marketing agreement between two corporations and it is for this reason that the term "industrial joint venture" has been used.

A JV in the context of the fertilizer industry is taken to embody a specific industrial or manufacturing process at its core, with the co-operation over the marketing of the JV products being merely one of the components of this process.

Fundamentally, such an international JV should display certain distinct characteristics:

1. It should be a separately incorporated enterprise to its investors (who usually comprise of local and foreign partners).

2. The investors must be from at least two or more countries and commit capital assets to the undertaking.

3. Management responsibilities, risks, and operational control should be shared amongst the partners and usually this reflects the equity share of the joint venture.

4. Neither partner should receive benefits from the enterprise other than through a share of the net earnings.

The parties to the JV may be individuals, corporate bodies, governments or government agencies. In the case of South East Asian JVs, the local partner may often be a host government agency, such as the National Fertilizer Corporation of Pakistan (NFC), whose shares are wholly owned by the Government. The agreements themselves may be either bipartite or multipartite.

What forms may a joint venture take?

There are two main forms of joint ventures: contractual JVs and equity JVs.

Contractual JVs are formulated in countries where the national laws do not recognize the concept of privately owned property by foreigner. This is true of the command or planned economies of the COMECON countries. Contractual arrangements are made with regard to the supply of inputs by the foreign partner such as capital, equipment, industrial property, technical assistance and know-how. These are made available to the local partner (or government) in return for compensations which may depend on production, sales, profits, etc. Other forms of contractual joint ventures may involve liscensing, know-how and marketing knowledge transfers. It is important to note that contractual joint ventures are sometimes used as a preliminary arrangement prior to the formulation of an equity joint venture.

Equity joint ventures are much more frequent than contractual joint ventures. They involve participation of at least two partners in the equity capital of an existing company. More often, a new company is incorporated in which each partner owns a certain portion of the equity capital. It may well be easier to structure the operations of such a new company rather than to attempt modifying the structure of an existing one to the new methods of operation. Once an equity joint venture is adopted by joint venture partners, they must then decide on the appropriate legal framework for the enterprise, with regard to the host country's rules and regulations.

The two main types of JV, namely the contractual and equity sharing enterprises, can take several different forms in reality. These could generally be sub-divided into four categories, those which are:

1. Commercially oriented,
2. Inter-governmental (aid) orientated,
3. Raw material influenced,
4. Those motivated mainly in the interests of regional co-operation.

Commercially motivated JVs are fundamentally aimed at extracting the abundant raw materials available in DCs, harnassing low labour costs, and producing fertilizers for the domestic market, international market, or both. Such ventures are usually found between a foreign partner comprising of a medium or large sized firm from the North (for example, a transnational corporation (TNC)) and a local partner consisting of either a private firm or government agency. The host country generally establishes the extent of the equity share and the experience of the ASEAN region, for example, has seen foreign equity shares restricted to under 50% of the total capital requirements. The foreign partner may, however, exercise a stronger hold on management and marketing functions, thus providing the venture with a stronger position in an international perspective.

Aid oriented JVs more usually feature government to government participation. As the construction of fertilizer plants require high technology and capital inputs and are seen as assisting both the national agricultural productivity and industrial development facilities of DCs, they can form a significant feature of international aid programmes. This is especially so since they may provide some employment to private foreign construction and support firms at least at the early stages of such projects. Therefore in host nations with abundant materials and adequate facilities, aid orientated joint ventures are a feasible proposition.

Raw materials influenced enterprises are those JVs where raw materials are extracted from resource rich regions (without large markets) and exported for processing to locations nearer their inteded markets. Alternatively, the raw materials may be value-added through partial or complete processing near their original locations. Given that resources and markets for fertilizer do not co-exist all the time, and given that there is a need to search wider to locate new more economical sources, raw material influenced JVs can be found in many regions of the world.

Joint ventures formed as a result of regional co-operation can play a very significant role in the economic development of the developing regions. It is increasingly evident that ventures on a scale large enough to induce profitable economies of scale to be achieved are all too often too large for fulfilling single-country demand. Hence the desirability for building fertilizer plants to satisfy the aggregate demand of several regional partners is evident. The existence of regional unions such as ASEAN and ANCOM enable the aggregate market to be reached free of intra-regional customs qotas and levies, an in addition with the support of common transport, distribution marketing and research networks. The examples of this in the fertilizer industry include the Senegal Project and the ASEAN-Indonesia Project, both of which have distinct implications for regional and intra-regional co-operation in the economic development of those areas of the world.

Partners in a joint venture enterprise can vary considerably. Fundamentally, an international industrial joint venture as referred to in this paper must have at least one foreign partner and one local partner from the host country. The foreign partner is usually from an advanced nationa in the North, and could be a private firm (commonly a transnational corporation (TNC)), a foreign public sector body, or a foreign government itself. The same pattern can be applied to the local partner in the host country. Typically, joint venture agreements tend to involve the foreign private investor or foreign government and a local private or public sector participant or the government itself. The most common form of joint venture is one between a foreign private firm and a local private firm. As indicated above, there may well be more than two investors or partners within the framework of the joint venture enterprise.

Joint ventures in any form between developing country governments are much fewer in number, although they do hold much potential for the future. Given that many developing countries have to contend with similar types of social and economic problems, a joint attempt to establish fertilizer production facilities to fulfill a wide market need seems a logical one.

Aside from the above mentioned combination of partners, there also exists the North-North ventures where tow foreign firms operating in a third host country (usually a developing country) may establish joint ventures for purely commerical motives. As this paper is concerned with the role of joint ventures with respect to improving the economic situation of the developing countries, this form of joint venture is not pursued here.

II. Recent Experiences In International Co-operation in The Fertilizer Industry

This chapter outlines:

1. Distribution of feedstocks necessary for the fertilizer industry;
2. A general picture of the latest global fertilizer production and consumption trends;
3. A review of the recent international cooperation schemes in the fertilizer industry through the joint venture process.

The overview of production and consumption patterns here should make apparent the need for, and the potential to be realized in, the expansion of fertilizer production capabilities in the developing countries through the establishment of more joint ventures agreements.

Raw Material Distribution

FAO statistics reveal that the development of the fertilizer industry will not be hindered by the shortages of feedstocks in this century.

Fundamentally, there are three categories of raw materials needed for the production of fertilizers. These are :

1. Natural gas, coal, and crude petroleum for the production of ammonium and nitrogenous fertilizers;
2. Phosphate rock and sulphur for phosphatic fertilizers;
3. Potash and brine for potassic fertilizers.

Natural gas, the preferred feedstock for ammonium and nitrogenous fertilizers, is plentiful in the Middle East, Africa and Asia. Yet in terms of production, on average the manufacture of fertilizer uses the following proportions of the world production of raw materials : 85% phosphate rock, 40% sulphur, and 95% potash, as compared to only 3% natural gas and 0.05% oil products and coal. With large reserves of gas and oil at hand, there is no cause for immediate concern regarding feedstock supplies to the fertilizer industry. Ammonia feedstocks can be found in many developing and developed countries, although the former are in a much stronger position with regard to the ratio of reserves against production levels, than the latter. Coal reserves are also ample for the future world consumption needs. However, whilst in general hydrocarbon feedstocks are adequate, they will be increasingly costly in the foreseeable future. This necessitates the use of more energy efficient technology in developing countries, which could be obtained through joint venture agreements.

Phosphate rock, beside coal, is one of the most variable inputs in terms of quality to the fertilizer industry. It is widely and yet unevenly distributed globally. The USA, USSR and Brazil accounted for 52% of 1986/7 production levels, with about 70% of the sources being located in Morocco itself. World phosphatic deliveries declined by 4.2% to 148.6 million tons in

1985, reflecting the decrease in the world consumption of phosphatic fertilizers. Whilst the rate and extent of new phosphate rock discoveries far exceed current consumption, the present trend of low grades rock will mean that both consumers and producers alike will need to display more selectiveness in the evaluation, specification, grading and selection of this feedstock.

The largest share of world sulphur consumption is directed at the production of phosphatic fertilizers. The total global sulphur production reached 35.8 million tons in 1985, whilst consumption, having shown an increasing trend in the previous two years, declined in 1985 by 500,000 tons to 37.2 million tons. The resulting deficit was largely fulfilled by using Canadian stocks which are the largest at present. Overall, the fertilizer industry should be able to obtain all its sulphur requirements in the next 25 years. This should build up to a significant increase by 1988 as USSR and USA increases push production to about 38.4 million tons. The general view is that for the next few years consumption will outstrip production (with reserves being drawn upon) but by 1990 the USSR, through major new production facilities, will contribute about 3.5 million tons to world supplies, thereby helping to strengthen the outlook for sulphur.

Potash reserves are very large at around 132 billion tons and accordingly adequate for many centuries to come. USSR and Canada together contain about 80% of resources, the remainder being located in USA, Europe, the Middle East, Thailand, Congo and South America.

Production Patterns

From the viewpoint of combined global production of these three primary nutrients, the latest data indicate that in the 1984/85 fertilizer year (July 1st to June 30), production reached 140 million tons (Appendix 1, Table 1a). This was an increase of 11 million tons over the previous year; 4 million (37%) of which could be attributed to the developing market economies, 3 million (27%) to developing market economies, and 2 million (18%) to centrally planned economies.

It is very significant to note that it is the developing country economies which registered the highest production growth rates for each nutrient in 1984/85 (Appendix 1, Table 3 for average growth rate summary). This should promote the further establishment of joint venture projects in these regions of the world.

This section will examine the production patterns for nitrogen, phosphates, and potash in turn in the following regions :

1. Developing market economies;
2. Developed market economies;
3. Centrally planned economies.

In nitrogen production worldwide, the main contributors in 1984/5 by far were the developed countries, followed by the developing countries and the centrally planned economies.

Within the developing market economies, a substantial growth in nitrogen production was evident, with the Near East and Latin America both displaying growth rates pver 20%. The Far East, dominated by India and Indonesia, provided 13% or the largest addition to production (878,000 tons)

In the devloped economies, USA showed production growth rates in nitrogen of 18% (1.7 million tons), West Europe 6% (680,000 tons), and Oceania 22% (48,000 tons) (Appendix 1, Table 3a).

In the centrally planned economies, only China contributed heavily to increases in growth rates by producing over 1 million tons of nitrogen. USSR, Romainia, Czechoslovakia and Poland registered smaller increases, whilst Hungary and the German Democratic Republic (GDR) showed a decline in production.

In phosphate production globally, a similar pattern to nitrogen production was noticed, although there was a small decrease in production by the centrally planned economies.

Amongst the developing nations, Latin America registered a 30% increase in phosphate production, mainly due to Brazilian efforts, whilst both the Far East (mainly India) and Near East (especially Jordan) displayed significant rises. Africa, however, illustrated a decline in production, caused mostly by the fall in Moroccan output.

In the developed world, phosphate production was marked by a 6% increase, owing to American efforts. Production in West Europe increased marginally but that of Oceania decreased..

Amongst the devloping countries, Jordan had a major contribution to potash production through Dead Sea sources. It accounted for over 70% (120,000 tons) of the increase in potash production amongst the developing country economies.

The small increase in USSR's potash production over the previous year was the only significant sign of activity in this nutrient sector, with GDR and China displaying only marginal increases.

Consumption Patterns

The total global consumption of the three primary nutrients reached 130.7 million tons in the 1984/85 fertilizer year (Appendix 1, Table 2a). This represented an increase of 4.2 % over the previous year's level of 125.2 million tons, but this was less than half the growth rate of the previous year.

The largest percentage increase in consumption was in the developing economies which were, in addition, the only economies to feature increased consumption in each of the three nutrients. The average increase for all nutrients in the developed economies was just under 1%, owing to the small increase in consumption of nitrogen and the decline in phosphate and potash comsumption.

Consumption patterns within the developing world could be sub-divided into the following regions :

1. Africa,
2. Latin America,
3. Near East,
4. Far East.

In Africa, the overall consumption of fertilizer declined in the 1984/5 model year, largely due to national financial problems (Appendix 1, Table 3). There was a small increase in nitrogen consumption, and general declines in phosphate and potash consumption. The growth prospects for 1985/6 will be largely influenced by the level of fertilizer aid received, as since 1983/4, 28 out of 44 African nations received some form of fertilizer aid (especially those in the Central African and Sahel regions). This fact supports the need for more joint venture cooperation in the developing regions in order to alleviate external dependence and create the fertilizer production capacities which are urgently needed.

In the Latin American region, a strong recovery in the consumption of all nutrients could be seen in the 1984/5 year from the significant decline experienced a year before (Appendix 1, Table 3). Of this, Brazilian consumption constituted 45%, and Mexico 25%. Cuba, Colombia and Chile all registered increases in all nutrients. Improved weather conditions and better prices for agricultural products helped foster this favourable situation. This growth is anticipated to continue into 1985/6.

The Near East registered a decline in general consumption, with an absolute decline in use of nitrogen and potash and a small rise in phosphates. Turkey accounted for 34% of total consumption, Iran 24%, and Egypt 20%; the largest decrease in consumption was by Egypt, followed by Turkey and Iran. Saudi Arabia provided a rise in the general consumption. Unfavourable crop price relationships, reductions in subsidies and poor weather contributed to the overall consumption patterns. Growth rates for 1985/6 are expected to be modest.

The Far East featured growth rates for all nutrients which were higher than the latest 5-year averages for the second consequetive year. India contributed significantly, and consumption levels in both Indonesia and Pakistan increased (-in the previous year they had declined). Philipines, however, registered a marked fall. The end of the Indonesian drought, and better crop-fertilizer price relationships in Pakistan helped the upturn, with the Philippines involved in major internal reforms. A strong growth in consumption levels is predicted for the next model year and this is largely attributed to positive government policies and sustained efforts to increase the application of fertilizers.

In the centrally planned economic regions, the emphasis in growth centered on Asia with no significant increases in Eastern Europe and Russia. A marginal increase in total consumption of phosphates was evident in Eastern Europe and the USSR, but that of potash and nitrogen decreased. In Asia potash consumption declined a little, and small increases in nitrogen and phosphates relative to the previous year could be seen. Growth prospects in Eastern Europe and the USSR for 1985/6 seem likely to be mostly determined by weather and the effciency of the transport system.

III. Setting-up Fertilizer Joint Ventures in Developing Countries

From an overall perspective, it is evident that the developing regions of the world are necessary partners in the future of the fertilizer industry worldwide. The developing countries have a large portion of the required feedstocks, as indeed a very significant share of the present and anticipated demand for fertilizers. Their growth rates in production and consumption as indicated by the diagrams in Appendix 1, Table 3, suggest that joint ventures in these regions will have a firm place in satisfying national demand and supporting industrial progress. With an ever increasing food deficit, the need to reinforce and expand the production capacities in the developing countries is vital.

Moreover, the traditional means of expansion mostly through the establishment of TNC subsidieries or other foreign enterprises operating purely in foreign interests is no longer practical in the socio-economic and political context of today's world. Future expansion must contribute economically to the host and the host region. Such an expansion, from the host's viewpoint, must also be made within the confines of manageable capital and operational costs, as well as adequate returns (whether viewed from a private or national viewpoint) in mind. It is clear that the establishment of fertilizer plants is sensitive to economies of scale. Gains through this means can only be brought about through the incorporation of more modern, efficient technology and better management services. It is, therefore, at this stage that the feasibility of joint ventures becomes apparent.

Joint venture agreements in the fertilizer industry are yet small in number. Nevertheless, they are still very distinctive. Amongst the examples of successful joint ventures projects, highlighting the recent co-operation efforts in the fertilizer industry, are the undertakings outlined in Appendix

In the post-war period, amidst much controversy regarding the role of foreign enterprises such as Transnational Corporations (TNCs) in the developing world, the clear tendency set by the TNCs has been to invest directly in the developing countries almost exclusively through their wholly owned subsidiaries. Such subsidiaries have normally been answerable only to the parent company abroad, and local interests were inevitably made subordinate to the foreign firm's business objectives. Local participation in most cases has been minimal, or in situations where it has been more extensive, the controlling power has resided with the foreign company. Moreover, such subsidiaries have been in a position to use links with their diplomatic missions in the host country to overcome possible issues or confrontations raised by the host government. However, with the changing international situation and in particular the progressive ambitions of host governments, foreign investors have come to realize the political, social and economic constraints imposed on subsidiaries as an instrument of their overall global business strategies and the need to partake in a more harmonious relationship with developing country governments. Yet until fairly recently, and quoting a range of problems including that joint ventures are troublesome, less easy to control, unstable and riskier, most Western TNCs have tended to avoid joint ventures unless they have had no other forms of investment in a developing country.

The remainder of this chapter addressed two main themes. Firstly, an analysis shall be made of the local partner's (and host government's) views regarding the enterprise. Secondly, the attitudes of the foreign partner (usually a TNC or medium sized corporation) to the joint venture process will be examined. The two viewpoint together, it is hoped, will present the general case for joint venture agreements which could then be presented within the context of the world fertilizer industry.

1. The Joint Venture As Seen By the Local Partner (Host)

This section will consider, first, the progression of the stance adopted by many developing countries with respect to foreign investment. It will then examine the views of the local partner with respect to joint venture proposals.

In most developing countries, the decision to embark on a joint venture is not made solely at a private company level. Approval of the scheme, regardless of the type of local partner, will often be made directly or indirectly by the host government. Following the emergence from the colonial period, the national constitutions of many developing countries, India being a prime example, sought often in a socialist style to protect local interests and resources from unrestricted foreign exploitation.

In the Indian case, it is argued by many that any foreign attempt to invest in India was effectively a decision to invest through a joint venture agreement. The Indian Policy Resolution published in 1948 stated :

> "...the major interest in ownership and effective control should always be in Indian hands." (6 April 1948)

The Industrial Policy Statement issued by the Government of Pakistan also in 1948 declared that foreign investment would be permitted providing that :

> "...it claimed no privileges and that opportunities for indigenous capital are provided and monopolies avoided."

This meant that Pakistani citizens should have an opportunity to subscribe to at least 30% of equity in all companies and at least 50% in those on a special governmental list of industries. Both countries have since these early times toned down on these restrictive declarations : majority holdings by Indian nationals in joint ventures enterprises have been welcomed and not made compulsory. Similar freedoms in equity participation in Pakistan have been outlined in the 1958 Industrial Policy Statement. Generally, over time, there has clearly been a relaxation in terms of entry for foreign investors. This has been reflected in changing governmental policies regarding composition and control, as well as in the practical interpretation of such policies on a "merits of the individual case" basis.

The stance adopted by countries such as India and Pakistan since independence has been well documented. The trends which have subsequently emerged in the investment environment here have shown similarities with the plight of many other developing countries. As such, four main stages, categorized by Tomlinson (1970) as Unilateral Antagonism, Mutual Suspicion, Joint Acceptance, and Sophisticated Integration, have emerged. These stages throw an important light on both the need for future joint ventures in areas such as the fertilizer industry of the developing regions, and also on the perceptions of these agreements from a local viewpoint.

The first stage, deemed as Unilateral Antagonism, occurs when a newly independent nation displays fears of economic domination. It may fear the unseen presence of a colonial power through neocolonial ties, or even a now-displaced local elite. This results in a host government fostering a different distribution of benefits and responsibilities, often along egalitarian or more socialist lines. Foreign direct private investment becomes suspect during this phase for two reasons. Firstly, as it is private at a period when a host may be experimenting with a socialist model, or, owing to the desire to centralize social and economic control to harness national resources for development. And secondly, as it is foreign investment and as such supported by powerful foreign governments - a threat to national sovereignty.

The second stage - termed Mutual Suspicion - sees the host nation embroiled in the major problems concerning economic development. Inevitably, foreign exchange problems begin to appear owing to characteristically high rates of imports. Foreign capital investment and technological assistance become vital in supplementing national resources and fuelling national development strategies. Alternatively, foreign owned extractive enclaves may help in providing the host with some of these requirements, but these sources can not avail the host of all the required range of resources. As a result, the new nation gradually encourages the entry of foreign technology and capital, but a rigid control is still maintained. This, however, usually leads to mutual suspicion between the host government and foreign investor as they become wary of each other's motives and interests.

Stage three is the phase at which large developing economies such as those of India and Pakistan have reached at present. With foreign investments making a widening presence in the host economy, much is still in the making. If foreign investment is introduced and the net social benefit is greater than the net social cost bourn by the host, then the joint venture is placed in a stronger position. Hence the description of this stage as one of Joint Acceptance. The stability afforded by the host and the reactions attributed by the government (see Chapter 6) are critical in conditioning the response of the foreign investors. Whilst appropriate measures of encouragement are beingmade by many developing country governments, in many cases the required political stability and assurance of non-restrictive government policies for the future operation of the joint venture are not as secure as might otherwise been expected.

The fourth stage would be a continuation of stage three when a relatively harmonious relationship between the foreign investor and the host bears fruit and leads to the continuing confidence in the investment environment. This would provide a strong impetus to economic growth and further relaxation of entry of foreign investment are likely to be tolerated. Tomlinson believes that at this stage local interests and participation will be promoted more through discretionary fiscal and financial incentives rather than through the more damaging legislative prohibitions. As a result, this stage has become known as the stage of Sophisticated Integration.

The above outline of the four general stages of national progression places the joint venture agreement in an almost unique position in national development plans. It is an attempt to promote at least two groups of interests with a clear financial and social return in mind, but balanced by humanitarian motives. It is the overall contribution of the enterprise which is the most important element in this joint effort, not the return to any one

individual partner. These four stages display the urgent input requirements of developing regions and also play a crucial role (see Section 2) in answering the question of why foreign partners choose this particular form of investment in developing countries.

As this section is primarily concerned with the attitude fostered by the local partner to the joint venture, it is vital to consider the individual reasons for undertaking this form of investment. These are now considered in approximately the descending order of importance. Surveys conducted by UNIDO on joint ventures in the ASEAN petrochemical industry, together with numerous academic surveys, have contributed to this ordering. The reasons include :

a. Acquisition of newer foreign technology and know-how;

b. The access to raw materials from abroad at concessional rates;

c. Acquiring new means of distribution abroad and penetrating foreign markets;

d. The need to develop national industrial bases, diversification of product lines;

e. New capital infusion.

It is evident from the abovementioned stages that the developing country government, over time, become increasingly anxious to offer incentives to draw foreign direct investment into the developing economy. These incentives are aimed at stimulating both the public and private sectors.

The ensuing transfer of technology is clearly one of the most dominant reasons cited by local partners for embarking in joint ventures, especially when the local partner is a government agency or public enterprise. With research and development costs being prohibitively high, and as, in view of demographic and other constraints, the host is often unable to allocate much time for developing and refining necessary technologies, developing country governments are understandably enthusiastic in harnessing every available means to establish the industrial base needed for their economic development efforts. The actual technological transfer can now take several forms. These include : licensing of older, established technologies and knowledge to the developing country partner; selling franchises to local commercial partners; or direct selling of technical equipment and service support, perhaps individually. In the fertilizer joint ventures, this transfer of technology is vital if economically efficient, large scale plants are to be constructed to meet local and regional demand. The technology needed for this form of industrial enterprise need not be highly sophisticated ; yet newer methods of fuel efficient processing are necessary in the developing regions in order that the current (and in many cases aging) technology found in developing countries can be updated to meet the highly competitive conditions found inthe world markets. These newer methods, once successfully incorporated to suit the local environment and its problems, can then form the basis for South-South joint ventures. This would enhance regional self-sufficiency.

The access to alternative raw material sources is a second reason stated by the local partner (as indeed the foreign partner) for entering into a joint venture agreement. This is evidenced in a recent fertilizer joint venture between the Governments of India and Nauru (Pacific) whereby the latter was responsible for the supply of phosphate rock to India at very favourable prices specific to this undertaking. It is clear that factor prices and endowments are an essential reason behind the decisions to embark on joint ventures and these factors could refer to items such as physical materials, labour supply (skilled and unskilled), and management skills. Local partners are concerned with the assurance of a sustained growth of exports in the face of trade restrictions, competition, barriers to entry abroad, and demand saturation in certain markets and therefore require access to their local resources together with efficient and economical inputs of foreign resources.

Local partners, particularly private firms, often favour this means of business reconciliation as a path to acquiring new means of distribution abroad. Penetration of individual foreign country or international markets is a very difficult and a potentially dangerous business commitment for many a developing country firm with limited resources and contacts at its disposal. A joint venture, however, provides a opportunity which can strength such a commitment both from the viewpoint of the joint venture itself and even after participation in the venture from either partner is no longer necessary. This ability to access foreign markets and in addition obtain the support in marketing and distribution sectors afforded by the foreign partner is invaluable to the local partner and host. From a host government perspective, regardless of whether the local partner is from the private or public sectors, it can be seen as strengthening overseas links and stimulating economic activity at home, as long as the social cost to the host is in proportion to the returns.

Another reason favouring joint ventures from the local partner's viewpoint centers on the need to establish or develop a national manufacturing base. Host governments may seek to implement regional economic policy by setting up a state agency or trading company (such as the National Fertilizer Corporation of Pakistan) specifically for the purpose of starting joint venture agreements with foreign partners. The local partner may then aim for the penetration of a specific regional market, new or existing, and harnessing the combined inputs afforded by all partners in order to meet the investment operations of market competitors. Alternatively, if the local partner was a private sector firm, the venture may provide an opportunity for diversification of the product line, as indeed a geographical diversification of company operations, and ultimately gain a larger market share. This may bring future market security for the local partner.

The use of joint venture enterprises as a means to prompt an infusion of foreign capital is not as strong a motivation for the local partner as might have been expected a decade ago. Whilst this input is clearly very valuable in that the financial burdens are shared, host governments have been at pains to restrict outright foreign financial and thus executive control of the venture. National legislation in many developing countries has restricted the equity share held by the foreign partner and has suggested that management and executive control of the enterprise should reflect the general equity share by the partners. The introduction of public shareholding and funding of joint ventures has been another act of caution by host governments. The foreign partner, in many cases, has shown a reluctance to invest heavily owing to concerns over long term market viability and apprehensions about future

political stability. Instead they have seen a necessity to generate local confidence by committing some equity at the early stages of the venture but making provisions for a gradual withdrawal. This strategy is in harmony with local interests. For local partners, decreasing equity joint ventures can satisfy the requirements for actively increasing their level of control as their experience and expertise develops over time.

This section has proposed five main reasons why joint venture agreements may be deemed as favourable from the angle of a local partner in a developing country. It is now in order to examine the viewpoint of the foreign partner to this venture.

2. The Joint Venture As Seen By the Foreign Partner

To be persuaded that joint venture agreements offer a more balanced outlook to investment prospects in the developing regions may not be, at first, an easy proposition for a commercial TNC to grasp. It is evident from the past that directly controlled subsidiaries, acting predominantly for foreign interests, have been very profitable in exploiting the resources necessary for the livelihoods of TNCs abroad. In the changing international stage of the last two decades, political, social and economic factors in the developing regions have generally changed, making the position of TNCs more sensitive. An appropriate change to their global business strategy has been necessitated.

This section will examine :

The rationale in embarking on these agreements by foreign partners as such:

a. The appeal in the clarity and structure of joint ventures;

b. The joint venture as a means of market entry and better market control;

c. Risk minimization overseas;

d. Access to raw materials and factors of production;

e. Sale of technology;

f. Access to special national investment incentives.

The decision to participate in a joint venture agreement with a local partner in a developing country will not stem purely from commercial motives of the potential foreign partner. This has been evident through a survey done by Tomlinson (MIT, 1980) of British firms choosing the joint venture form of investment in India and Pakistan. This survey indicated several common reasons underlying the emergence of joint venture proposals in this region. The two reasons most critical to the position of the foreign partners were explicit and implicit pressures imposed on the foreign firms by the host government regardless of the status of the local partner.

As a result of these pressures, it is evident that the position of the foreign investors in developing countries is not as secure as it once was in the past. Foreign corporations are no longer as able to dictate the terms of entry and operation, and are increasingly forced to acknowledge the interests of host governments. Therefore, the corporations may logically be expected to seek out the most advantageous position which is available within the opportunities and boundaries for investment made available by the host government. Joint venture agreements thus seem an appropriate vehicle for this purpose.

Aside from the two reasons mentioned above, there are a host of reasons which argue for the creation of more joint ventures in different sectors, especially the fertilizer industry. Several of those outline in Section 1 governing the local partners attitudes towards joint ventures also apply to the foreign partner. Some of the more important of the general reasons are highlighted below.

The structural framework of the joint venture enterprise itself could be an appealing factor to a foreign corporation exploring ways of investing abroad. By virtue of the need to reach a consensus between the foreign and local partners on the ultimate aims and the steps needed to achieve these, the joint venture enterprise assumes a clearly defined corporate structure. The enterprise thus does not have wasteful tradition-bound practices or other unnecessary additions and is fundamentally lean. As such, it is, at least from an administrative viewpoint, in a more able position to achieve satisfactory returns on investment. Moreover, the enterprise evolves as a flexible body and thus is appealing to foreign partners who would otherwise be suspicious of local bureaucratic mechanisms interfering with corporate efficiency.

The foreign partner could view the joint venture as a means of circumventing the nationalist actions against foreign investment which have been witnessed in many newly independent developing countries. The desire to enter and learn the needs of new domestic markets, or improve the effectiveness of existing marketing efforts in a specific region often prompts their involvement in such agreements. There could also be a desire for vertical integration of existing products and the avoidance of cyclical or seasonal instabilities with regard to the nature of the foreign partner's business abroad. In addition, the foreign firm may wish to utilise the better established transport and distribution networks of a local company, with longer term local interests in mind, thus adding strength to its marketing functions. Such local interests could involve a gradual strategy of matching other competitors' investment operations in a given developing economy and strengthening the firm's market outlook.

The policy of risk diversification, adopted by most international corporations today, may encourage more interest in joint venture proposals. A TNC may wish to spread its international operations and corporate capital over a wider range of interests worldwide so as to minimize risk. There are normal business risks to be considered, as well as the special risks posed by political and economic uncertainty when attempting to operate alone in a foreign environment. In particular, foreign firms, including some already involved in joint venture operations, tend to fear restrictive policies adopted by host government after their investment efforts have materialized.

The need for raw materials and local facilities have also influenced foreign corporate interests in the developing regions. The attractions of lower transport, labour and raw materials costs in developing regions feature strongly in decisions by the foreign partner to take part in joint venture agreements.The support of local firms which are more familiar with local conditions and procedures, together with local assistance in acquiring factors of production such as skilled and unskilled labour, marketing facilities, and help with legal and political matters also play an important role. As a result, the opportunity to join an feasible project initiated by local interests has proved an attractive option for a foreign corporation intent on diversifying its own business interests. This would also prove some form of local identity for the firm which would further enhance the image of the foreign firm in developing countries.

The opportunity to sell older technologies and technical services, together with capitalizing on specialized corporate assets (such as patents, franchises, brand names) may act as an incentive to form joint venture agreements with local partners. Many companies have shown a willingness to cooperate in this field, rather than commit larger capital inputs to joint ventures.

The access to special incentives offered by the host government as apart of the joint venture proposals, especially tax, quota and import privileges, has proved to be a strong incentive to foreign participation in local joint ventures. In addition, the foreign partner might then be able to compete and gain market experience from behind protective tax barriers present in the economy.

This section has highlighted several main reasons why the industrial joint venture proposal in general may be seen by the foreign firm as a favourable means of cooperation. It is evident from both the local and foreign partners' viewpoints that a definite area of mutual cooperation and benefits do exist (as the examples in Appendix 2 have illustrated), and it remains for the most suitably qualified and best placed partners to formulate the basic corporate framework within the national rules, regulations, and governmental approvals of the operating environment. This paves the way, in Chapter 4 Part B, to examine the basic differences between the various forms of joint ventures.

Relative Merits Of Different Forms Of Joint Ventures

1. The Importance Of Public Enterprise As A Local Partner

Public enterprise as a local partner in a joint venture agreement can assume several forms. It may refer to a government trading agency, a nationalised body, or a state corporation. Cooperation between a foreign partner and a public body is, as yet, an uncommon form of partnership. Yet the potential for this form of joint participation within developing regions in the establishment of fertilizer plants may be underestimated, especially since such a partnership may offer a contribution which is more to the national benefit than a purely private joint venture.

There are several conditions necessary for the involvement of public enterprises in industrial joint ventures. Firstly, there must be public enterprises in production and trade in a given field. Secondly, public enterprises must have the required economic power to establish such joint ventures. Thirdly, they must have the necessary managerial staff and abilities to operate within the agreement.

Whilst the advantages offered by international industrial joint ventures were qualitatively relatively balanced in general between the private and the public sectors, it is clear that some of these advantages may be especially realized through public enterprise joint ventures. The benefits to be gained by foreign firms through joint ventures with public enterprises include those deriving from :

a. The long term commitments of public enterprises;

b. Preferential access to resources;

c. Protective legislation for public joint ventures;

d. Large scale joint ventures.

Public sector enterprises generally have a longer term view of the national economy and in their operation take into account national goal and priorities, thus giving more stability to the foreign partner in the joint venture agreement. In fields where longer term involvement is necessary (e.g joint exploration and extration of raw materials for the fertilizer processing, the establishment and utilization of infrastructure, or joint production, sales, and servicing organizations), the contribution of public enterprises is of value to the foreign partner in the joint venture. This stability would help lessen the risk elements with which foreign partners are often concerned in entering such ventures.

The foreign partner may also acquire preferential access to local capital, skilled manpower, and resources when involved in a public sector joint venture. This is of particular importance to the industrial venture. Benefits in the form of assistance in complying with local regulations (and exceptions to general rules) and in the granting of special licences and permits may be accrued through involvment in this form of joint venture.

In some nations, there is national legislation providing some degree of protection and compensation for foreign investments which are entwined in public enterprise joint venture agreements.

In addition to this reduction in political risks, public sector enterprises could create larger and more efficient production base for a given region, or a solid export base for world markets, thereby satisfying the economic viability criteria which is often demanded by the foreign partner. This would also benefit the host economy since the most highly valued of the foreign contributions, aside from technology transfer to the host, is the greater access afforded to foreign markets.

From a national perspective, public sector joint ventures enable better control over some international operations of foreign firms, such as reverse capital flows, transfer pricing, and profit repatriation. In addition, better bargaining power vis-a-vis foreign investors, the potential or tighter capital and resource control, and a larger share of exported and processed materials could be achieved. Moreover, such partnerships could contribute more to the spread of imported technology than through private sector enterprises. When linked to the advantages offered through national science, technology and research facilities, coupled with access to national marketing and transport networks, public sector joint ventures could be a potent form of cooperation.

The very involvement by public enterprises can also be construed as a further obstacle to a potential foreign investor.With regard to the advantage of enhancing political cooperation and guaranteeing commercial freedoms, rapid changes in government may reverse the privileges granted by a former administration to such an enterprise. The national interests within which such public bodies (often non-profit making and generalized) operate can also conflict with the more economically motivated aims and strategy of the foreign partner. The potential delays in government decision making, especially in the early stages, can incur irrecoverable losses in an enterprise as finely balanced as a joint venture. Moreover, in cases where the local partner is a large state, the tension which can arise as to who is effectively in control can pose significant strain on a joint venture relationship. It may well be better in opportunities where public sector joint ventures are warranted, for such ventures to concentrate less on equity partnership and more on contractual relationships for technology, know-how and marketing strategies.

Having examined the benefits offered by a public enterprise as a local partner, the next section will contrast the adavantages posed through the most common form of partnership : private sector participation.

2. The Characteristics Of Private Sector Participation

The advantages to be gained through private sector joint ventures include:

a. Greater flexibility and speed in operation;

b. Greater efficiency;

c. Less internal political restrictions;

d. Greater interaction between partners.

Assuming that the compatibility of partners is not in question, joint ventures involving private firms seem to be managed along more economically justified strategies, at least initially, and are less susceptible to be drawn out by political factors due to social and national interests. Thus, the internal political restrictions are reduced and the enterprise is given greater freedom in its day-to-day operations. This freedom may be coupled with a greater opportunity to exchange ideas and views between partners, in contrast with public sector joint ventures where the authority of the public enterprise, reinforced by the say of the government, may disturb the long term relationship with the foreign partner. An agreement where two or more private partners can negotiate around a potential issue, guided by their mutual business objectives - the profitability of the joint venture - may prove to be a more efficient example of industrial cooperation as opposed to government-foreign partner confrontation.

Perhaps the single biggest argument in favour of private sector participation, as against the presence of a public sector body as the local partner in the industrial joint venture, is that of economic efficiency. Public organizations, owing to their very nature, behaviour and operational constraints, may not in general be as efficient in the utilization of resources or bring as high a rate of return as private sector joint venture agreements. It is principally for this reason that many foreign corporations with interests in the developing country economies have chosen to embark on industrial joint ventures with local private corporations.

Yet, one of the most crucial factors affecting the private sector joint venture agreements can not be avoided. Despite the lessening of internal political friction through cooperation with local private firms, the host government still commands, directly and indirectly, dominant control over the operation and indeed the success of the joint venture. Irrespective of the individual joint venture's performance, government policies condition its survival in the long term. For this reason, the significance of the government's role will be analysed later in Chapter 6.

3. Government-To-Government Cooperation

This form of joint venture is much less common than private or public sector ventures. It is motivated primarily for reasons of aid and political goodwill, or regional cooperation. Joint ventures involving government-to-government participation illustrate a form of South-South cooperation.

With regard to the fertilizer industry, this form of joint venture agreement can play an important role in the developing regions of the world. The construction of fertilizer plants and the associated infrastructural facilities is a technically complex, capital intensive and time consuming task for a single nation. Moreover, the plant would in all probability require resource inputs from abroad in the long run. Given these constraints, it seems feasible to promote intra government negotiations for joint ventures in order to alleviate the burden on a single government and establish production capabilities in a suitable location. The doner would not be acting purely for altruistic motives. Although it may offer capital and technical assistance to another government for purposes of establishing a joint venture, the doner would benefit, for example, through the sale of its own raw materials, technology, and support services to the venture, or through the purchase of favourably priced fertilizers produced through the joint venture, or concessions of one form or another. A recent case in point concerns a joint venture project partnered by the governments of Nauru and India.

The government of Nauru wished to reinvest revenues accruing from its exports of rock phosphate in profitable foreign joint venture schemes. Moreover, Nauru was intent on diversifying its investments geographically, and consequently was searching for appropriate investment possibilities. India, meanwhile, with a high fertilizer consumption level and low indigenous production of rock phosphate, was in a position to make use of Nauru's raw material and capital inputs to improve its own production capacities for phosphatic fertilizers. In the spirit of goodwill, and with an interesting and feasible opportunity at hand, the two governments embarked on an industrial joint venture based in India. A company (Paradeep Phosphates Limited) was established with 40% equity being provided by Nauru. India, thus,

was able to acquire the principal raw materials at competitive conditions, whilst Nauru similarly benefitted from employment, export revenues (with all Indian dividends repatriated to Naurur in hard currency), stronger diplomatic linkages, and very valuable experience in joint venture enterprises. As a further example of South-South cooperation, Nauru was able to build on the experience gained through the Indian venture in negotiating on a similar level for a joint venture enterprise with the Philippine Phosphate Fertilizer Corporation (PHILPHOS).

This example highlights the case where government-to-government cooperation met with success in the form of an industrial joint venture in the fertilizer industry. It demonstrates in particular that such proposals have optimistic prospects especially between nations unfettered by historical disputes and political suspicion. This understanding forms a crucial base to the reconciliation of potential differences which inevitably arise in any joint venture enterprise. In such a situation, healthy commercial interests are a mutual advantage to both partners.

4. South-South Cooperation

The examination of the role of government-to-government cooperation in joint venture proposals made in the previous section is one aspect of the need to promote South-South cooperation. There is a need to promote intra-South joint ventures especially as vehicles of technology transfer and in marketing with both private and public sector participation.

Several reasons are forwarded for using this form of enterprise as a first step in stimulating regional cooperation. Recent time series analyses by S.Lall (1982) indicate that intra-South trading relationships have shown little positive change since the mid-1960's.

One of the major advantages of joint venture proposals in the developing regions concern the similarities present in social, economic, and political environments within developing nations of the South. There are many common structural and political issues across developing economies which lend developing country partners with common awareness in the approach to the establishment and in particular the implementation of joint ventures. As a result, there is a welcome degree of parity, for example, in the human and personnel approaches of partners from witnin developing regions. Similarly, there exists a higher level of mutual appreciation of different cultures and industrial bases amongst such partners.

The need to stimulate economic activity and do so with national development interests and policies in mind provides the joint venture enterprise with an advantage over purely commercially orientated organizations. National governments, in collaboration, can exert a major influence in the operation of private and public sector joint venture agreements and in the provision of the necessary intermediate technology, infrastructure and skilled labour required by the enterprise. These ventures could benefit greatly from regional customs and tariff unions, common transport networks, assistance from government trading agencies, as well as common regional research and development facilities. This may well eliminate wasteful duplication of facilities and instead lead to a synergistic outcome whereby the sum of all individual efforts will be greater than the simple

aggregation of the individual contributions. Joint venture agreements, irrespective of the form, could also be designed to operate within regional law as opposed to national rules and regulations, and hence make use of profitable clauses and exemptions.

On the important issue of technology transfer, joint venture agreements would enable a regional spread of appropriate technology through relatively easy and harmonious means. Heavy dependence on the technological input and managerial support provided by the North is clearly not advisable in the long run and the need to refine and develop technical methods and knowledge suitable for developing country environments is ever present. Yet, given the widespread disparities in endowment amongst the South, it is evident that in such a individualized situation, certain developing economies are able to undertake a moderate technical research and development effort which then leads to further polarisation. This calls, therefore, for a means of technology diffusion, and joint venture agreements may well provide such an opportunity. Sanjay Lall (1982), however, argues that it is inadvisable to concentrate on intra-South technological development as a means of reaching a high level of technologiacl self-reliance. He forwards the notion that South-South technology promotion will, inevitably require further inputs of technology and capital from the North. Nevertheless, the potential for regional cooperation in this field is very evident.

It is useful to exercise a further word of caution with regard to the use of joint ventures for intra-South cooperation. In a regional context, public sector joint ventures are more prone to difficulties in several respects than private sector ventures. The enterprise may find itself exposed to the compounding of public enterprise problems of the participating nations. It may meet difficulties in entering foreign markets owing to the low market efficiencies characterised by public enterprises. However, this weakness could be overcome through the hiring of foreign trainers for a set period. Besides the possible low levels of efficiency, there is also the element of imprecise socio-economic objectives associated with public enterprise participants. Consequently, the more ambiguous the focus of the joint venture operation, the greater the need to shield it from as many non-financial objectives of the public sector partner as is possible, and in addition the need to formulate precisely future objectives in the joint venture agreement.

IV. Obstacles And Areas of Potential Conflict

Although recent data concerning the status and performance of fertilizer joint venture agreements is scarce, information gathered on the petrochemical industry throws a valuable light on the vulnerability of ill planned joint venture agreements to failure. S.Lall (1985) states that by August 1980, of 399 joint venture projects approved by the Government of India for overseas operation, 161 (40%) were abandoned prior to commencement, 34 (9%) were abandoned after commencing operation, and of the 204 (51%) projects remaining, 117 (29%) were in production by August 30th 1980 whilst 87 (22%) were in various stages of implementation. J.Walmsley (1982) states that in the case of Saudi Arabia, about 70% of potential ventures were aborted owing to problems encountered in the early phases of formulation.

These figures highlight the dangers in the potential problems which may arise, leading to an aborting of the joint venture process. A recent UNIDO survey (on the ASEAN petrochemical industry) identified some main problem areas within joint venture projects and classified these into internal and external problems.

The main sources of friction between partners are :

1. Misunderstandings between the parties to the project stemming from differences in cultural and political backgrounds;

2. Differences in work habits, perceptions, and productivity;

3. Excessive dependence on specific parties for particular functions such as the foreign partner for technical inputs.

Amongst the key internal issues leading to conflicts is the frequent misunderstandings between local, foreign, and host government personnel with regard to day-to-day operation of the enterprise. This issue may be exacerbated by deficiencies in management and technical skills and the imbalance in the individual perception of power within the joint venture. This friction, apparent in many cases, could be attributed perhaps to differences in business attitudes, policies and cultural backgrounds. For this reason, the selection of the joint venture partners is of paramount importance to the success of the operation. Even when such problems inevitably arise, they can be dealt with promptly, partly through well organised personnel training sessions (with perhaps a larger contribution from the more experienced foreign partner), and partly through commonsense and the cooperative spirit on behalf of all partners. Clearly, the problem of cultural and business attitudes should be far less prevalent amongst potential South-South joint ventures, owing to similarities in the backgrounds of the partners. Fundamentally, it is essential to realise the very real possibility of partners disagreeing or diverging on policy within the joint venture framework, and that each partner must be willing to invest time to comprehend, adjust and negotiate out the problems. Unilateral decisions, regardless of the economic justifications and management judgements behind them, seldom solve probles in within such joint ventures.

Partially in connection with the above issue is the question of below-par work performance of local personnel owing to differences in working habits and attitudes, and perhaps dissatisfaction with the quality of work and salary scales relative to the (often foreign) managers. Once again, this is a common problem to many forms of business activity and the correct training of staff and personnel welfare policies can avert strikes, job losses and general disruptions within joint ventures. It may also help reduce high turnover rates amongst employees.

Given the importance attributed to the technological advantages posed by the joint venture process, the dependence on one partner, usually the foreign partner, for technological developments and managerial skills could be a significant source of friction between partners at a later stage of the venture. The holding of a virtual monopoly on different functions of the venture for any great length of time could create dissatisfaction amongst partners.The interpretation of technological improvements and the plans for expansion and diversification have in numerous cases led to disagreement between partners. This has revolved around the direction of improvement and indeed the nature of the innovation itself. Often the foreign partner has not shown enthusiasm, and therefore the essential support, for the call by the local partner for introduction of new techniques and equipment as the enterprise matures.

Local partners and host governments must be on guard against the possible dumping of outdated or inappropriate equipment and methods by a foreign partner who may be interested in diverting unwanted technology. Given that the technology required in the establishment of fertilizer plants need not be highly sophisticated, and yet sufficiently advanced so as to maximise the use of the feedstocks, care should be exercised in its selection. With regard to diversification of the enterprise, appropriate policy steps should be integrated into the statement of objectives in the early phases of the project, thereby obtaining the guarantee of all partners in cooperation. Unanticipated changes must necessarily be discussed at the current time and in the appropriate cooperative spirit by all the partners, purely in the interests of the joint venture enterprise itself.

With regard to possible external problems facing the joint venture, several points needed to be made.

Local government, though it may be supportive towards a joint venture and provide investment incentives, can be a major source of conflict. Given the magnitude of this issue and the prime importance of government policy in the joint venture project, it will be discussed in greater depth.

A further external problem is the process of localisation or, as is commonly termed, "Indonesianization" or "Indianization". This refers to the desire voiced by many developing country governments to introduce as much a local (or national) elements, especially by way of human resources as is possible, giving the enterprise a distinctly national flavour. It forms in reaction to the fear of a wholly foreign dominated enterprise. As a result, it seems realistic to allow in the articles of incorporation of the joint venture for the gradual phasing out of foreign inputs and enabling the host partner to gain more control of the enterprise within his environment as his skills and experience progresses.

The fear of restrictive policies imposed after the formulation of the joint venture proposal and after the securing of the investment by the host country, is a major source of concern to the foreign partner. From the viewpoint of the foreign investor, this forms a part of the political risk or instability factor which conditions the attitude lent to the joint venture. As such, it is essential that the government policies and guarantees are made credible over time in order to enhance confidence in this and other prospective joint venture agreements.

In general, the need for the careful planning of the proposed joint venture project can not be underestimated. The feasibilty studies prior to the formal establishment of the enterprise, the selection of appropriately qualified partners, the negotiation of the objectives, composition and implementation of the project and the successful integration of this project into the host environment, all demand considerable forethought, expertise, and time (-the average joint venture takes seven years before industrial production can commence).

Three major guidelines need to be adhered to in the early stages of formulation in order that the enterprise minimises potential conflicts and complications :

a. The awareness of adequate pre-planning;
b. The need to ensure continuing interest and flexibilty of operation;
c. The importance of policy agreement.

The first of these requires the understanding that attention must be given to the practical functioning of the operation, and the notion of skill application, and general business appreciation. Joint ventures are complex and useful tools but need to be sharpened on the whetstones of business principles and not created merely, for example, to carve out markets for host economies.

Regarding the second point, partners must be prepared to work out a problem in a flexible operating environment.

Thirdly, the general experience points to a number of problems over dividend policies, capital increases, investment plans and transfer prices if materials and services are provided by one partner. In addition, any action by a partner to threaten the venture's self determination (by, for example, flexing its activities to fit the operations of the parent corporations global marketing and production strategies) could generate very serious reprecussions on the future of the joint venture itself. For this reason, the element of policy agreement at the outset and the need to sustain favourable business relationships between partners are crucial contributors to the spirit of negotiation, which must be made over conflict areas during the course of every joint venture.

In this setting, the host government clearly has a very definite contribution to offer. In the following chapter, an attempt will be made to examine this contribution to the success and failure of joint venture enterprises.

The Role Of Government Policy

The influence of host government policies and interests plays a integral part in all aspects of joint venture agreements in the developing regions. Regardless of the form a joint venture may take, and irrespective of whether the partners include the national government or its representatives in public sector organizations, the project must take into consideration the presence of direct and indirect political factors which affect the joint venture equation. This can be seen by the fact that the venture, necessarily, comes into contact with the host government in the following areas :

a. In national and regional industrial policies;

b. In foreign investment legislation;

c. In the import and export policies of the host country;

d. Through financial rules and regulations, policies on fund raising and equity;

e. In restrictive trade practices legislation.

The leniency which has been shown in the last two decades by developing country governments such as that of India towards foreign investment, especially in the form of joint venture agreements, have been particularly encouraging. Such encouragement and continued governmental support for joint venture proposals is essential. Private joint venture agreements stand little chance of succeeding without the prior blessing of the host government.

At the same time, governments must respect the integrity and freedoms of the joint ventures themselves, and to exact too many restrictions or demands in the national interest would be to thwart potential foreign investment, dampen the stimulation of economic activity at home, and impose immediate obstacles on the successful achievement of the joint venture objectives.

Clearly, there is a need to take sufficient steps to observe the performance of the enterprise and to ensure that some contribution to the host economy is made, and protect any blantant use of valuable national resources.

And, wherever possible, joint venture agreements should be integrated into national or regional industrial policies in order to prevent undue economic imbalance between regions. More specifically, they should be targeted at particular sectors of the economy. This latter feature has not been evident in many developing economies, perhaps for primarily internal political reasons.

In terms of the investment, trading practices, financial and equity policies, the host government has considerable authority in its relationship with the joint venture partners. The imposition of legislation on equity holdings; the wielding of taxes on end products; government assistance in the form of subsidies, support prices, and credit terms; government attitudes to pricing agreements and restrictive trading practices; and legislation on safety and quality control, all affect the joint venture's operations.

The government may also participate in the purchasing function, buying fertilizer from the venture and distributing the product via its marketing agencies. In addition, the government control of feedstock prices is crucial to the joint venture.

The role of such governmental agencies and trading bodies also influence the enterprise and the host could contribute to the success of the enterprise through making available national reseach and development facilities, together with agreements (as evidenced in the South American region in the ferilizer industry) with national transport and distribution networks.

A further governmental contribution could be to assist inexperienced local partners with the process of selecting appropriately qualified and well placed foreign partners for joint venture projects. This would involve the establishment of a database and support services, and it would be especially justified for cooperation on a regional basis. Such institutional support is evidenced in Brazil and Argentina, but is uncommon in most other developing regions. In Argentina, Brazil, and Mexico, the governments have also established institutions such as the Instituto Nacional de Technologica (Argentina), or the Instituto Nacional da Propriedade Industrial (Brazil) in order to handle the required registration and approval of joint venture enterprises.

Besides the element of control imposed on joint ventures by these institutions on behalf of host governments, these institutions can assist joint venture proposals in research and development and act as a third party in negotiations. However, they also play an observer's role in that they are empowered to demand information on the economic activities of the joint venture. More developing region governments could utilise such arrangements in the process of attracting and establishing cooperation for fertilizer production plants.

Incentives in the importing and exporting fields are another area in which host governments could make their contribution better felt. A reduction in import duties on materials vital to the joint venture as against competition may in some cases be justified in the short term. In the export sector, room for preferential trading agreements should be allowed with parties linked to the joint venture.

From the viewpoint of the local and foreign partners, harmonious relations with the government and other political groups is much desired. This would facilitate the legal and external adminstrative dealings considerably, and prevent the polarization of views which so often brings about the downfall of a joint venture enterprise.

Whilst taking care to maintain cordial relations and, in a spirit of goodwill, advising the host government perhaps annually of general business performance, the joint venture partners must take care to preserve their operational independence and secure the maximum cooperation from the government and public sector bodies. It is only by cultivating a favourable relationship with the government authorities that the joint venture may reasonably expect the government to appreciate and understand potential problems and pitfalls unique to joint ventures and offer a sympathetic stance during such periods.

Essentially, the host government plays a protective role in joint venture agreements, acting in the national interest and in support of local partners who may be less dominant than the foreign participant in many joint venture relationships. Even in the case of private sector projects, an element of governmental supervison is probably required. However, the issue of the degree of government involvment which is appropriate, particularly indirectly, is a controversial topic which warrants a separate analysis of individual national policies, the political system, and social and economic developments in each developing nation.

V. Conclusion And The Outlook For Joint Ventures In The Fertilizer Industry

This final chapter focusses on the development of joint venture agreements in the fertilizer industry in developing countries. It seeks to provide some general guidelines to parties in such projects, based on the analysis of successful joint venture arrangements in the sector.

The chapter addresses the following issues :

1. Objectives for host governments in promoting joint ventures;

2. Objectives for local partners in attracting and sustaining successful partnerships through joint venture agreements;

3. Objectives and considerations for foreign partners.

Prior to the formulation of the guidelines, it is helpful to outline in brief the procedure for the initiation and establishment of the joint venture agreement.

The concept of the joint venture project is usually initiated by one of the potential partners, and then developed into a framework which is more coherent for discussion purposes.

Following the selection of possible partners and the identification of individual interests, as well as a general appreciation of the economic, political, and social climate within which the venture is proposed, a letter of understanding or notice of intent is signed.

This paves the way for pre and feasibility studies where details such as the processes to be used, feedstock and fuel supplies, infrastructure, site, alternative financial packages and cost benefit analyses are carried out. These together form the basis of the joint venture agreement, its articles of incorporation, and licensing and marketing agreements between partners.

In this manner, the venture is established. From a host country's viewpoint, the important elements in the collaboration lie in finance, technology transfer, marketing, technical assistance, and research and development.

The draft contract, and the nature of agreements entered into by the partners depends largely on the laws and regulations present in the host country economy. For this reason, the host government, as emphasised earlier, plays a critical role in the successful promotion and continuation of joint venture agreements.

The following guidelines attempt to highlight the key areas in which government cooperation could be greatly beneficial to this form of enterprise. Following this, an outline of the importance of regional joint ventures, is attempted.

1. Government Objectives For Promoting Joint Venture Agreements

The laws and regulations which directly and indirectly affect joint venture operation can generally be attributed to the following broad classifications :

a. Industrial Policy : a regulatory mechanism designed to provide companies with a framework within which the government expects industrial development to take place;

b. Foreign Investment Legislation : these laws determine the extent and nature of foreign economic participation;

c. Restrictive Trade Practices Regulations : a set of rules limiting the monopoly power of corporations;

d. Financial Rules : a series of financial rules and regulations affecting the finacial operation of the joint venture. They include corporate taxes, excess profits taxes, income tax, profit repatriation;

e. Policies On Credit Raising And Loans : guidelines including specific instructions on raising capital for joint ventures;

f. Import Policy : a comprehensive policy on incentives for importing capital goods, machinery, and spare parts, and on the protection afforded to local fertilizer manufacturers against the import of similar products from outside.

g. Export Policy : a policy to encourage the export of fertilizers, and also the provision of incentives to preferential commercial dealings.

Within these laws and regulations, the host government could set policy objectives to enhance the initiation of new fertilizer joint ventures and sustain existing ones in the following areas :

i. The control and assurances in the supply and pricing of raw materials and feedstocks to the project;

ii. The monitoring of the technology involved in the project, as well as the effectiveness of this transfer process. In addition an evaluation of the real motives of foreign partners with respect to the transfer is desireable;

iii. The integration of joint ventures into national industrial policies;

iv. The provision of facilities in the marketing, distribution and transportation sectors, in particular the assistance of government trading agencies and national networks. In an effort to promote regional ventures, the establishment of a central database on essential requirements for the joint venture process is warranted;

v. There is an increasingly important need for the host governments to further their negotiation skills within the joint venture process.

In terms of the control and assurances in the supply and pricing of raw material inputs to the joint venture, the host government can exert a very strong pull on the entire operation of the project. Indeed this is an area where the government must strive to maintain confidence in its ability to maintain stable input prices. The foreign partners have shown a tendency to fear indecision on behalf of the government, when after initial guarentees and the consequent establishment of the project, the government has changed input prices, resulting in some cases in throwing the project economics into disarray.

The monitoring by the government of technology employed, and on the effectiveness of the technical transfer process, can be a welcome source of support for the local partner. It will offer precautions against technological dumping of obsolete foreign equipment. This aspect of government policy will intrude to an extent on the business freedoms of the enterprise. Nevertheless, in the case of many developing country local partners when the resources and facilities necessary to enable such technical checks to be made are lacking, the government may be the only party with the required facilities, capable of reliable advice.

In this connection, the host government should, as a policy rule, make available the use of technological research institutes for participants of fertilizer and other joint ventures which are often too immature to establish their own.

A further point concerns the necessity in overseeing that foreign investment should have only well reasoned commercial motives and not be a means of making the venture dependent on the partner's wider global interests.

A policy guideline on the monitoring and evaluation of progress is useful in the context of fertilizer joint ventures. Experience indicates that these procedures are inadequate in many developing regions. The aim of these would be to see if the terms of the joint venture agreement are being adhered to in spirit, and not simply by letter, and to observe any serious deviations or malpractices present which are contrary to the expectations at the formulation of the agreement. Governments should establish and review continuously appropriate systems and techniques for these functions, so that joint venture undertakings could be made to agree with national interests continuously.

The government should ensure that wherever possible joint venture agreements also serve as a vehicle of manpower development at all levels. This assists the local economy to acquire new skills and knowledge.

Related to the above point is the need for the host government to coordinate the development of an educational infrastructure on which it can build a national technological base. This feature may, in particular, benefit joint ventures on a regional outlook, as in the case of the ASEAN Indonesia Fertilizer Project.

The host government must ensure that future joint venture agreements provide for the fade-out of equity participation by the foreign partner, thus according the local partner with increased responsibilities. Compensation trading arrangements could be arranged for foreign partners. As an alternative, there may be arguments for increasing - rather than decreasing - equity ventures whereby the partners may be offered, at a prearranged stage of the project, an opportunity to increase (buy-back) their share of equity. Proponents of this policy argue that this will enhance the competitive nature of successful ventures and be a further stimulus to business.

The provision of national facilities and networks for the use of joint venture projects is particularly striking in the case of the Latin American region. The role of government research and development institutes, government trading agencies, national marketing and distribution networks, all play a critical role in the encouragement of joint ventures. The widespread knowledge and use of such national sources is not commonplace, and collaboration in the fertilizer industry amongst the Latin American countries seem the main example.

The establishment of a regional database in order to encourage regional joint venture formation could be a useful and time saving action on behalf of government policy. This centralization of a wide range of essential information can dramatically hasten the average period of seven years usually required for the project to come on-stream.

In terms of negotiation skills, it is essential that in the forthcoming decades, the host governments acquire these skills which enables them to be on par with the foreign partner of a project. The developing country economists display, usually, relatively poor negotiation skills, and this could be corrected through appropriate government action. Negotiation skills on the issues of technological acquisitions, and financial affairs must be conducted skillfully in order for the developing nation to obtain the most favourable terms. Help over such training could be sought from other developing neighbours or international organizations and consultants.

This section has so far dealt with suggestions for general governmental guidelines concerning fertilizer joint ventures. It is in order now to examine the importance of government policy relevant to regional joint venture promotion efforts.

Within the fertilizer industry, joint venture agreements on a regional cooperation basis may prove an especially productive tool in fulfilling aggregate demand for fertilizers, and contributing to general regional economic development. This assertion is based mainly in the observation that the achievement of economies of scale in production, storage, marketing and distribution will, ceteris paribus, result ultimately in higher profit margins and higher levels of economic efficiency. A higher level of aggregate regional demand would warrant a larger sized plant, and provided a high utilization rate is maintained, a lowering in the costs of production could be ensured.

Regionally incorporated joint ventures will enable the drawing on widespread regional resources to fulfill national and international demand competitively. This circumvents the problems faced by individual nations in the lack of one or another input. It also reduces the incidence of cases in the past when governments have been so engrossed in their own plans for developing their technology for internal technical transfers, as well as increasing sales to local markets, that they have had neither the opportunity nor finance to organize operations at a regional or international level. Moreover, this has made individual countries more susceptible to internal and external risks. The effective shelving of the State Fertilizer Manufacturing Corporation of Sri Lanka in 1985 owing to the escalating costs of imported naphtha and inability to compete with natural gas based fertilizers of the Middle East, is a case in point.

Until relatively recently, most developing country governments have ignored the benefits of large scale production made with the cooperation of regional enterprises and governments. Moreover, having made little attempt to compete regionally in the sale of acquired and indigenised know-how and experience, they have tone down to create the opportunities needed to match international competition in technical and commercial sectors. As a result of the lack of information-sharing, countries have also become isolated, with each spending considerable sums of scarce national resources, perhaps uneconomically, for the same purpose.

Yet, it is important to emphasise that in the last decade changes have been apparent as more regional interaction has got under way. Some nations especially India and Saudi Arabia have deliberately encouraged (through special legislation) local firms to embark on joint venture agreements. A few others have established some engineering and consultancy services which have played a role in the construction of fertilizer plants. In addition, regional cooperation in the fertilizer industry through ASEAN and ANCOM have emerged.

In instances where joint ventures, be they private public or government projects, are proposed for the establishment of a fertilizer plant, there must exist the means by which an appraisal of the needs and facilities in a regional partner could be made. Similarly, information on potential partners could be assimilated to enable quicker and more upto date access to data. The creation of a regional database, as proposed by UNIDO in the petrochemical industry seems a solution to this issue. This could contain a range of services available to joint venture projects, a directory of technological capabilities, a world supply and demand analysis (including professional and industrial services offered), essential market information, and a list of potential partners, their qualifications, interests, and track record.

Cooperation amongst regional partners on technical matters through centrallised research and development facilities and frequent symposiums may assist in overcoming the logistical and technical problems associated with setting up fertilizer joint ventures. The main initial input to such measures would come from foreign industriallised sources, be they TNCs or foreign governmental assistance, but the subsequent development of this information would lie with such regionally incorporated bodies. Given that many regional partners often share common problems in economic development, it would be possible to orientate the new technolgy to suit the special needs of the developing countries.

Besides cooperation over technical matters, cooperation in marketing and raw material supplies plays an equally significant role. Foreign skills will prove valuable in this sector, especially the marketing knowledge of the larger international corporations. However, such skills will not be easily obtained if they are thought to be detrimental to the interests of the foreign donors themselves. Governmental negotiation will play a major role in offering concessions in return for valued inputs and such inputs should be examined with relevance to the needs and regional environment in order to maximise the impact of joint venture agreements. Clearly, a certain element of internal political friction may be evident in such intra-regional dealings but it is in the interests of all to share and benefit from this information.

2. Objectives For Local Partners

This section examines:

a. The position of the local partner with respect to other parties in the venture,

b. A suggestion of some important guidelines which are instrumental in achieving a successful joint venture.

In many joint venture relationships, the local partner is more inexperienced and has less financial strength than the foreign partner. In such a situation, the local partner may need an alternative source of assistance, separate to the foreign partner. Given the limited resources at its disposal, the local partner should then not hesitate in seeking the cooperation of the host government in issues such as an evaluation of technology and technical knowledge transfer from the foreign partner.

However, for such national cooperation to take place, it falls to the host government to take the necessary steps to generate confidence in government cooperation, its dependability, and its advice. For this reason, the previous section has suggested the encouragement of more links between the host government and local industry, through the offer of national facilities available for potential and existing joint venture participants.

With joint venture agreements, the local partner should pay particular attention in future to the following areas :

1. The areas of plant operations;
2. Maintenance and spare parts;
3. Technical services and personnel training;
4. Research and development.

Whilst these areas pertain to both private and regional cooperation efforts, in the case of the former there may be greater possibilities of mismanagement or domination of the project by one partner.

Effective operation of the fertilizer plants is essential in lowering costs of production and enhancing competitiveness. Moreover, lack of operating experience and poor training of key personnel contribute little to optimum capacity operation (which helps reduce costs of production) and this characteristic can be observed in many developing economies.

Maintenance of established plants is critical in reducing overhead costs in the long term. Climatic conditions in many developing regions may be relatively harsh, requiring predictive and preventive maintenance. The foreign partner or independent foreign service organizations, often with sound experience in this field, should provide assistance in this sector for a set period, but for the future of the joint venture, well organised training programs for local staff is vital. The efficient provision of spare components and ancillary materials will assist in overall maintenance objectives.

Technical services, ranging from trouble shooting, quality control programs, and feedstock and process monitoring, are critical to the operation. With locally initiated fertilizer plants, the lack of technically skilled operators are a common problem in many developing regions. Temporary assistance, together with long term training is necessary through the joint venture agreement.

Research and development, as outlined earlier, are important in keeping fertilizer plants upto date and contribute in giving more momentum to local developments once the official joint venture agreement lapses.

Besides the guidelines suggested in the these four areas, the local partner must ensure that a clear and precise declaration of the joint venture objectives is drawn up at the outset of the project. This is necessary to maintain the enterprise on a predefined, but flexible, course of action. Such a course must have the mutual agreement of all the partners and appropriate initial steps for dealing with extraordinary circumstances and problems should be provisionally established.

The expected benefits to all partners should be clearly identified and articulated at the negotiation stage.

Furthermore the joint venture objectives must be formulated directly with the fertilizer needs of the host country in mind. The local partner, in particular, should be authorized to search for the best terms and prices in the purchasing of raw material inputs, and not be constrained by pressure from either the host government or foreign partner.

3. Objectives And Considerations For The Foreign Partner

This final section will examine guidelines for the foreign partner's role in the fertilizer joint venture proposal and ways in which its input could be made more effective. The following general areas are considered :

a. Importance of a well organised and defined corporate structure;

b. Project implementational features;

c. Planning for localization;

d. Assistance in training personnel;

e. Seeking operational efficiency;

f. The need for marketing and sales support.

From the viewpoint of foreign partners, one of the attractions of joint venture enterprises in developing regions is that there is opportunity to agree on and define a clear and well structured project from the initiation of the business idea. Thus, in the process of establishing a working agreement, the foreign partner should utilise its valuable managerial and legal experience to ensure that the venture is covered by the proper and adequate legal framework, designed to secure the optimum business performance. This would minimise the likelihood of differences in opinion on the essential elements of the operation and contribute to a stronger and leaner enterprise.

In terms of implementation, its assistance in collaboration with suggestion from the local partner should lead to the project being established on appropriate technology with projected cost and time scheduling. The use of local capabilities in design, engineering, equipment supply and also help in construction should be maximised without risk to infringing the project objectives, and without damaging the shareholders' interests.

Foreign partnerships in developing country project must be aware of changing socio-political environments, and plan their long term policy to be geared towards the localization of management in stage by stage basis. Agreement on this important area should be clarified in the initial agreement. Preference in hiring personnel may be given, where possible, to the local labour pool, and this becomes important especially in instances where projects are established with the desire to improve a country's regional economy in mind.

Training is a major feature of foreign involvement for it is hoped that new skills would be introduced to a region through joint venture employment. Adequate training should be provided to ensure sate and optimum operation of fertilizer plants. Properly trained personnel could be instrumental in saving a substantial amount annually in plant maintenance, particularly in locations suspectible to climatic extremes where high rates of material and machinery depreciation may be common.

In terms of plant operation, the desirability in operating on the highest possible on-stream factor can not be emphasised adequately. It is necessary to seek high utilization rates in order to minimise the costs of production and thereby offer a competitive product. Clearly, the regular uniterrupted supply of feedstocks at attractive prices is vital, and the host government may be influencial in this area.

The foreign partner's expertise in marketing and sales could be a major asset to a venture, provided that it is relatively free from other intentions of the partner. Assistance in establishing an entry into markets overseas (assuming local demands are satisfied) is vital to the continued functioning of the joint venture. Within the host economy, the local partner may be the main source of marketing power through its awareness of the prevailing environment.

From the preceding chapters, it should be increasingly evident that joint venture enterprise is generally well suited to play a more prominent role in the progress of the developing world. The diagrams in Appendix 1 Table 3 depict the fact that the highest fertilizer production and consumption growth rates for the 1979/80 to 1984/85 period are attributed to the developing economies. This is indicative of the future potential for expansion through joint venture agreements in this sector.

However, inspite of the potential usefulness of joint venture agreements in the fertilizer industry of the developing world, this can not be realised without the support of two critical factors.

Firstly, the host government must, where possible, target, promote and continuously support joint venture agreements in specific sectors and regions within the country. In this, internal political inhibitions must be made to take a secondary place to stimulating economic activity within the overall framework of industrial policies.

Secondly, the production outputs must be primarily geared to fulfilling national demands, prior to seeking export markets abroad. Moreover, it is necessary to support the efforts of the joint venture enterprise with a suitable domestic agricultural policy which forms a link between the output of the plant and its arrival on the farmer's hands. Government assistance in the provision of a fertilizer subsidy may be welcome in the start-up period of the venture when high overall costs of production are inevitable.

If, within these guidelines, a favourable climate of sustained cooperation and negotiation can be established between the local partner, the foreign partner, and the host government, and the need to operate efficiently in a specifc country environment is acknowledged, then joint ventures in the fertilizer industry potentially have a very useful future in alleviating the problems of hunger in the developing economies of the world.

APPENDIX I AND II

A Review Of Recent Joint Ventures In The Fertilizer Industry Of The Developing Regions

Commercially Orientated Joint Ventures

1. Pakistan - Dawood-Hercules

Partners : Local - Dawood
Foreign - Hercules Chemicals (USA)
Capacity : 160,000 tons of nitrogen as ammonia per year
Products : Urea
Market :

Following the Pakistani Government's encouragement of joint ventures in establishing fertilizer plants, this project between Dawood and Hercules Chemicals (USA) was initiated largely in order to use the abundant local natural gas supplies. It has operated successfully, without expanding, for many years.

2. Pakistan - Exxon

Partners : Local -
Foreign - Exxon (USA)
Capacity : 80,000 tons of nitrogen as ammonia per year
Products : Urea
Market : Local

This is a private joint venture representing Exxon's interests in the fertilizer industry. The plant has been successfully serving the local urea market for many years.

3. Qatar - Qatar Fertiliser Company

Partners : Local - Qatar Government
Foreign - Norsk Hydro (Norway)
Capacity : 1800 tons ammonia & 2000 tons urea per day
Products : Urea
Market :

The Norwegian fertilizer producer, Norsk Hydro, proposed the establishment of a joint venture plant with the Qatar Government. Norsk Hydro is a financial partner, provides the management as well as the technical services, and markets the products.

4. Ruwais Fertilizer Industries (Fertil)

Partners : Local - Abu Dhabi National Oil Company (ADNOC)
Foreign - French Petroleum Company (CFP), Mitsubishi (Japan)
Capacity : 1000 tons ammonia, 1500 tons urea per day
Products : Urea
Market : Export

This was initiated by the Abu Dhabi National Oil Company (ADNOC), with the cooperation of the French Petroleum Company (CFP). The whole output will be exported, with Mitsubishi of Japan handling sales operations.

5. India - Zuari Agro Chemicals

Partners : Local - IFC, Baila
Foreign - US Steel Company
Capacity :
Products : Ammonia - urea - NPK
Market : Local

The United States Steel Company provided part of the investment capital and technical support in this private ammonia-urea - NPK unit built in Goa. The IFC and Baila's also contributed capital and technical inputs. Raw materials such as phosphoric acid (Mexico) and potash are imported, but naphtha is obtained through local sources.

6. India - Coromandel Fertilizers

Partners : Local -
Foreign - International Minerals & Chemicals (IMC), Chevron
Capacity :
Products : Ammonia - urea - NPK
Market : Local

This private joint venture was established through the efforts of International Minerals and Chemicals (IMC) (USA) and Chevron (USA), and is located on the esat coast at Visakhapatanam. It is an ammonia-urea - NPK plant, using local phosphoric acid made from phosphate rock imported from IMC in the US.

7. India - Madras Fertilizers

Partners : Local - Indian Government
Foreign - AMOCO (USA), National Iranian Oil Company
Capacity :
Products : Ammonia - urea - NPK
Market : Local

This public company was promoted by the Indian government with AMOCO of the USA and the National Iranian Oil Company. The latter has links with a near-by oil refinery from which naphtha for ammonia production is obtained for this venture. Phosphoric acid for the ammonia-urea - NPK production is imported from Mexico. AMOCO initially managed the venture but now the Indian government is in control.

8. Nigeria - Kellogg

Partners : Local - Nigerian Government
Foreign - Kellogg (USA)
Capacity :
Products : Ammonia - urea
Market : Local

Kellogg, an international engineering company with extensive experience in ammonia plant construction, has participated with other companies in this joint venture with the Nigerian Government to build and operate an ammonia - urea unit based on local natural gas. The companies have also jointly established a marketing system. Despite some initial delays, the plant will initiate production in 1988/89.

Government to Government Joint Ventures

1. Pakistan - Pak-Arab Fertiliser Company

Partners : Local - National Fertilizer Company (NFC)
Foreign - National Oil Company (Abu Dhabi)
Capacity : 1000 tons ammonia, urea
Products : Nitrophosphate, calcium ammonium nitrate
Market : Local

The Pakistani Government established the National Fertilizer Corporation of Pakistan (NFC) largely in order to promote joint venture projects and fulfill Pakistan's increasing demand for fertilzers. The NFC is a holding company and it encouraged the Pak - Arab Fertilizer company to modernize and expand a plant initially built with French aid. The Abu Dhabi government, through its National Oil Company, is a 48% equity partner in this venture, which in addition to Pakistan government equity assistance and underwriting of foreign credit, has obtained credit from the World bank, the Asian Development Bank, the OPEC Special Fund, and several US banks.

Although the involvement by Abu Dhabi in this venture may be seen as a part of a commerical joint venture agreement, it has no need of the fertilzers and could build its own unit using local gas sources. Hence, the project is seen as a part of intergovernmental aid. The plant consists of a 1000 tons per day ammonia unit and associated urea, nitrophosphate and calcium ammonium nitrate units.

2. Pakistan - Pak-Saudi Fertilisers

Partners : Local - National Fertilizer Company (NFC)
Foreign - Saudi Arabian Government
Capacity : 1000 tons ammonia, 1740 tons urea per day
Products : Ammonia, urea
Market : Local

This more recent venture was financed by equity held by the NFC of Pakistan and loans from the Saudi Arabian Government, the Saudi Development Fund, and the Asian Development Bank. Rupee loans at subsidized rates werealso available by the NFC.

3. Pakistan - Hazara Urea Fertiliser Plant

Partners : Local - National Fertilizer Corporation (NFC)
Foreign - China
Capacity : 200 tons Ammonia per day
Products : Ammonia, urea
Market : Local

The NFC held all equity shares of this project which came on-stream in 1982 with half its total costs of construction (RS 760 million) being paid through Chinese aid. China also provided technical help and the plant produces 200 tons of ammonia per day.

4. India - India-Nauru Paradeep Phosphates Ltd.

Partners : Local - Indian Government
Foreign - Government of Nauru
Capacity : 2000 tons sulphuric acid, 750 tons phosphoric acid, 2400 tons ammonia per day

Products : sulphuric acid, phosphoric acid, ammonia
Market : Local

This joint venture was established for the production of phosphatic fertilizers as a result of close cooperation between the governments of India and Nauru. Nauru acquired a 40% equity holding and a proportionate share of managerial functions. The project used phosphate rock reserves of Nauru whilst the output was intended wholly for Indian local consumption. The unit capacity was 2000 tons of sulphuric acid, 750 tons of phosphoric acid, and 2400 tons of ammonia per day. Progress has been steady and very satisfactory.

Raw Material Influenced Joint Ventures

1. Tunisia - Societe Arabe des Engrais Phosphates et Azotes

Partners : Local - Tunisia
Foreign - Abu Dhabi Government
Capacity : 1000 tons phosphoric acid, diammonium phosphate, nitric acid, ammonium nitrate per day
Products : Phosphatic fertilizers
Market : Mainly export

This joint venture with the government of Abu Dhabi sought to exploit Tunisia's ample supplies of phosphate rock in the production of 1000 tons per day of phosphoric acid, diammonium phosphate, nitric acid, and ammonium nitrate. The foreign partner (Abu Dhabi) holds 40% equity share.

2. Tunisia - Industrie Chimique Maghrebine (ICM)

Partners : Local - Industrie Chimique Maghrebine
Foreign - Kuwaut Petro Chemicals Industries
Capacity : 1000 tons diammonium phosphate
Products :
Market : Export

ICM, a new Arab company, sought in a joint venture with Kuwait Petro Chaemicals Industries Company to produce 1000 tons per day of diammonium phosphate using phosphoric acid produced by ICM and ammonia imported from the Kuwaiti partner.

3. Tanzania - Kilwa Ammonia Company Ltd.

Partners : Local - Government of Tanzania
Foreign - AGRICO company USA
Capacity : 366,000 tons ammonia per year
Products : Ammonia, urea
Market : Mainly export

The Tanzanian Government, in a joint agreement with Agrico USA, built an ammonia - urea complex using new local sources of natural gas. Agrico has a 26% equity interest, and supplies management and technical support, in addition to undertaking export marketing. Tanzania's local demand is small although it could increase rapidly in the future.

4. Saudi Arabia

Saudi Arabia is developing a major industrial area at Al-Jubail with port facilities. In connection, it has planned several industrial joint ventures

here with Saudi Basic Indu ies (SABIC), two of which are for fertilizer plants. These will use lo . gas supplies. One of them, an ammonia - urea complex owned 50% by SAF.C and 50% by China, started in 1983 and has devoted 60% of its output to China. The other, will probably involve Indian assistance in construction and will cater also wholly to the Indian market.

5. Korea - Namhae Chemical Corporation

Partners : Local - several local interests
Foreign - AGRICO company USA

Capacity :
Products : Diammonium phosphate, urea, granular compounds
Market : Mainly local

This was a large project between several local interests and Agrico (- a major US phosphate rock and fertilizer producer). Agrico desired a large, steady market for its rock production and also for the finished products of diammonium phosphate, urea, and granular compounds in the Near and Far East. Agrico has 25% share in the project and supplies phosphate rock, technical services, and full export management support. As in the case of Sri Lanka, owing to the high cost of naphtha, the ammonia unit was closed and ammonia requirements for the manufacture of different fertilizer products imported.

6. Trinidad and Tobago

Agico assisted the National Commission on Energy in the construction of an ammonia - urea complex using local gas reserves. Agrico provides technical and marketing support.

7. Trinidad and Tobago - Grace

Partners : Local - Government of Traindad and Tobago
Foreign - W.R.Grace & Co. (USA)
Capacity : 900,000 tons per year
Products : Ammonia
Market : Mainly local

The Trinidad Nitrogen Co. operates an ammonia plant jointly owned between the above local and foreign partners in a 51% and 49% equity share. The plant was due to expand from 400,000 to 900,000 tons of ammonia by early 19888, at a cost of US$ 250 million.

8. Pakistan - Pan Islamic Chemical Company

Partners : Local - Pan Islamic Chemical Company (PICC)
Foreign - Jordanian Government
Capacity : 825,000 tons diammonium phosphate per year
Products : Diammonium phosphate
Market : Local

Pakistan is hoping to utilise more of its phosphate reserves for the manufacture of phosphate fertilizers. In a joint venture, the PICC has proposed the production of diammonium phosphate using locally produced ammonia and imported phosphoric acid from Jordan.

9. Sri Lanka - Agrico

Partners : Local - Sri Lankan Government.

Foreign - Agrico (USA)
Capacity : 530,000 tons diammonium phosphate and 50,000 tons triple superphosphate per year
Products : Diammonium phosphate, triple superphosphate
Market : Mostly export

In another venture seeking to exploit local phosphate rock reserves (estimated at 60 million tons), discussion was under way for this joint venture. Estimated cost : US$ 380 million.

10. Philippines - Philippine Phosphate Fertilizer Corporation (PHILPHOS)

Partners : Local - National Development Corporation (NDC)
Foreign - Republic of Nauru
Capacity : 169,000 tons ammonium sulphate, 965,000 tons NPK granulated compounds per year
Products : ammonium sulphate, NPK granulated compounds
Market : Local

This was a project to establish a fertilizer plant of four units : to produce sulphuric acid, phosphoric acid, ammonium sulphate, and granular compound fertilizers. The phosphate rock is imported from Nauru, and the sulphuric acid will be obtained from a local copper smelter. The Company is capitalised at US$ 100 million, with US$ 60 million subscribed by the NDC and US$ 40 million by the Government of Nauru. Total cost : US$ 350 million. The project was to be commissioned in 1985. It is reported that this Corporation may be privatised in the near future.

11. India - Indo Nauru Project

Partners : Local - Indian Government
Foreign - Republic of Nauru through Nauru Phosphate Co.
Capacity : 1000 tons diammonium phosphate per day
Products : Diammonium phosphate
Market : Local

The Indian Government holds 60% of equity here, whilst the Nauru Government holds 40% in a venture to produce diammonium phosphate with imported phosphoric acid and ammonia. Later the phosphoric acid will be produced from imported Nauru phosphate rock.

Regional Cooperation Joint Ventures

1. Senegal - Industries Chimiques du Senegal (ICS)

Partners : Governments of Senegal, Cameroons, Ivory Coast, Nigeria, India, the French Mining and Operating Associates, and two Indian fertilizer producers
Capacity : 1900 tons sulphuric acid, 780 tons phosphoric acid per day
Products : Phosphoric acid, fertilizers
Market : Mostly expor.

In 1974 the Senegalese Government initiated a study on the construction of a large scale phosphoric acid and fertilizer plant for on-site processing of phosphate rock. The aim was to produce and export phosphoric acid and fertilizer.

In November 1980, the ICS became an Operational Company with a capital outlay of US$ 53 million, increased by 1981 to US$ 61 million. The first tons of sulphuric acid was produced by December 1983, and the ICS complex was officially opened in April 1984. Loans were obtained from the International Finance Corporation (IFC), the European Investment Bank, the French Bank for Economic Cooperation, the African Development Bank, the OPEC Fund, and the Arab Bank for African Development. The Indian interests in the project hold 19% of equity, but will receive 50% (-100,000 tons) of the annual production of phosphoric acid under a 15 year supply contract

2. Indonesia - ASEAN Fertilizer Project

Partners : The Association of South East Asian Nations, with Indonesia Malaysia, the Philippines, Singapore, and Thailand.
Capacity : 1000 tons ammonia per day
Products : Ammonia - urea
Market : Intra-regional

The ASEAN nations agreed to cooperate in regional development of trade and industry. They have, together, large resources of natural gas, phosphate rock, potash, and by-product sulphuric acid. Moreover, all except Singapore have a dominant agrarian based economy.

A detailed World Bank study on possible regional joint ventures resulted in the first unit built under the ASEAN fertilizer project being located in Indonesia. It was a 1000 ton per day ammonia - urea complex which initiated production in 1984. A similar complex is being built in Malaysia, and a phosphate plant is being constructed in Indonesia.